



BRANDEIS UNIVERSITY
LIBRARY

Learned Journal Patron



In Memoriam

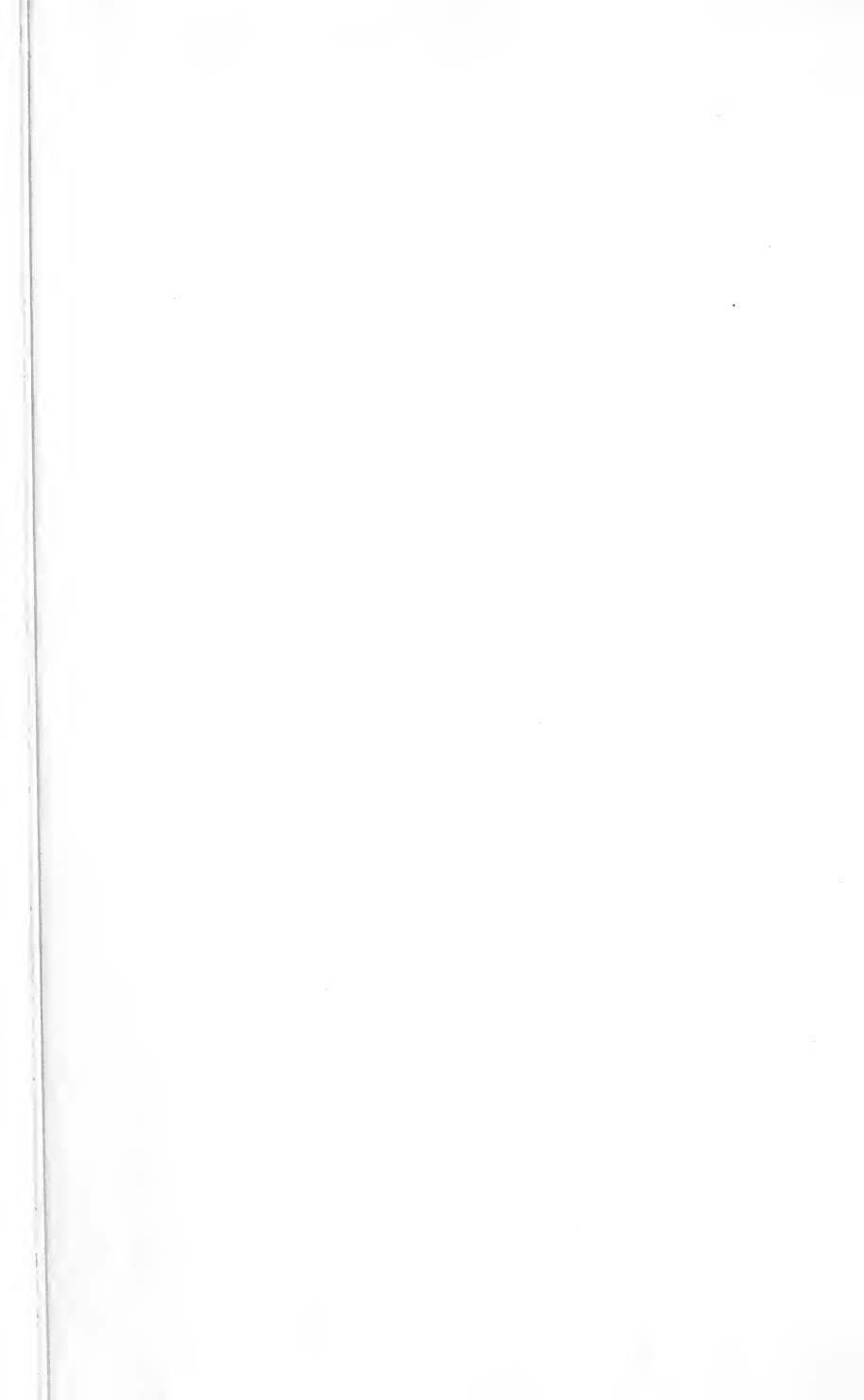
Flora Grosberg

Given by

Mrs. Abel Schuman

BRANDEIS UNIVERSITY
NATIONAL WOMEN'S COMMITTEE

Digitized by the Internet Archive
in 2011 with funding from
Boston Library Consortium Member Libraries



JOURNAL

OF

PSYCHO-

ASTHENICS

VOLUME 1

1896/1897



JOURNAL OF PSYCHO-ASTHENICS

Devoted to the
Care, Training and Treatment of the Feeble-
Minded and of the Epileptic.

Volume 1

1896/1897



Reprinted with the permission of
The American Association on Mental Deficiency, Inc.

JOHNSON REPRINT CORPORATION
111 Fifth Avenue, New York, N. Y. 10003

JOHNSON REPRINT COMPANY LIMITED
Berkeley Square House, London, W. 1

1-301

384

1-301

1-301

1-301

First reprinting, 1964, Johnson Reprint Corporation

PRINTED IN THE UNITED STATES OF AMERICA

301
17-1

CONTENTS FOR SEPTEMBER, 1896.

Some Studies in Heredity, M. W. Barr, M. D.,-----	1
A Study in Form, L. J. Sanderson,-----	8
The Thyroid as a Secreting Gland, Gaylord P. Clark, M. D.,---	16
The Association Minutes,-----	21
Address of President S. J. Fort, M. D.,-----	23
Announcement,-----	34
Notes on Institutions,-----	35
List of Members of the Association,-----	39

CONTENTS FOR DECEMBER, 1896.

A Case of Sporadic Cretinism—Dr. Julia St. J. Wygant,-----	43
Vocal Music in the Education of the Feeble-Minded—Miss Ella Frazee,-----	47
Custodial Care of the Adult Feeble-Minded—E. P. Bicknell,--	51
The Relation of Public Institutions to Scientific Investigation,	64
What's in a Name?-----	65
Notes and Abstracts,-----	67
From the Institutions,-----	69

CONTENTS FOR MARCH, 1897.

The Latent Tendency to Convulsions After a Primary Attack— J. W. Bailey, M. D.,-----	73
Training School for Attendants—Delia E. Howe, M. D.,-----	75
Attention—Alice M. Springer,-----	85
Report of a Case of Epilepsy—Margaret Bancroft,-----	88
Contribution to the Psychology and Pedagogy of Feeble-Mind- ed Children—G. E. Johnson,-----	90
Editorials,-----	108
Notes and Abstracts,-----	110

CONTENTS FOR JUNE, 1897.

Craniectomy, with the After-history of two cases—T. Telford Smith, M. A., M. D.	115
Observations on the Treatment of Epilepsy—A. M. Williamson, M. D.	125
Reminiscences—Catherine W. Brown,	134
Contribution to the Psychology and Pedagogy of Feeble-Mind- ed Children—G. E. Johnson,	141
The End of the Beginning	152
Orillia Meeting	153
Dr. W. H. C. Smith and wife, Private Home	153
The Storm at Lincoln, Ill.	154
How Birds Dispose of Defectives	154
Program of Twenty-First Annual Session of the Association	155

GENERAL TABLE, No. 2.

Showing the position of the various States and Territories in relation to the general system of the United States.

State

Month of year when first discovered.

First discovery of gold in California.

First discovery of silver in California.

First discovery of copper in California.

First discovery of iron in California.

First discovery of lead in California.

First discovery of zinc in California.

First discovery of tin in California.

First discovery of mercury in California.

First discovery of platinum in California.

First discovery of antimony in California.

First discovery of arsenic in California.

HOME & FOREIGN (1880)

Published by the

United States Geological Survey.

PSYCHOLOGY
READING ROOM

Journal of Psycho-Asthenics.

NO. 1.

SEPTEMBER 1896.

VOL. I.

SOME STUDIES IN HEREDITY.

BY MARTIN W. BARR, M. D.,

Chief Physician, Pennsylvania Training School for Feeble-Minded
Children, Elwyn, Pa.

Accepting without question that heredity is law—a law verified by accumulated evidence gathered in every department of science that treats of organic life—some examples of the force of this law as the subject of research to alienists and neurologists, may prove interesting to the student and also to the general reader.

Richarz arrived at the following conclusions based upon an exhaustive study of hereditary transmission: First, that mental defect is more frequently transmitted by the mother than by the father. Second, that the inheritance is more likely to fall either to one of the same sex as the parent affected, or to the child most strongly resembling that parent. He gives furthermore a sequence of liability in inheritance—a liability naturally increased where both parents are neurotic and intensified by consanguineous marriages.

- | | | |
|----------------|----|-------------------------------------|
| Mother insane. | 1. | The daughter resembling the mother. |
| " " | 2. | The son resembling the mother. |
| " " | 3. | The daughter resembling the father. |
| " " | 4. | The son resembling the father. |
| Father insane. | 5. | The son resembling the father. |
| " " | 6. | The daughter resembling the father. |
| " " | 7. | The daughter resembling the mother. |
| " " | 8. | The son resembling the mother. |

Much stress has been laid upon the transformation of type in hereditary neurosis, which does indeed occur, amounting not infrequently to the extreme opposite type; thus, an insane parent may bear an epileptic child, or an epileptic parent a child who is a profound idiot. But in solving this as in many another problem, the difficulty arises from confounding cause and effect. It must be recognized that it is not necessarily a *specific* neurosis that is transmitted, but may be such instability or disordered arrangement of nerve tissue as may evidence itself by different types in various generations according to the degree of prepotency in the mingling of the parental elements.

In the transmission of nervous diseases there are several facts to be noted: First, direct transmission of a neurosis patent, such as epilepsy, insanity or idiocy, from parent to child. Second, the transmission of such instability of nerve tissue from both parents as shall unite to establish neurosis in the child. Third, such neurosis appearing in entirely new type or developing one latent for generations, derived perhaps from some forgotten ancestor. This reversion, showing unmistakable evidence of the transmission through successive generations of latent disease, is one of the most mysterious and at the same time one of the strongest proofs of an inexorable law, written, as Darwin expresses it, in invisible ink, awaiting but the applied tests, to be revealed.

The reappearance of latent ill is most liable during the decade of development. It is then that great hereditary qualities assert themselves to lift the individual, or atavism to drag him down. To each comes the hour when like one of old he must struggle for the mastery of good or ill; as we read: "On the threshold of full reproductive life there is always a liability to break down—the organisms which break down in this way are so pronounced by natural law to be unfit to be reproduced or to live, the tyranny of their heredity has so doomed them." Rather let us call it nature's beneficent opportunity to say, "Thus far shalt thou go and no farther," and, by timely death to the individual to evolve new life for the race.

Another condition shows the neurosis assuming periodic form, or skipping a generation; thus, in a family of apparently healthy

stock, its members living to advanced age, one member in every third generation becomes insane. Again, we find a record of a man distinguished in church circles, himself exceptionally clever; his father a dipsomaniac, his son insane. Yet another form of periodicity is that of the neurosis developing in each member of a family at the same period of life.

Piorry relates the history of a family in which every member lost his mind at the age of forty.

Prosper Lucas quotes Michaelaes as saying that all the male descendants in a noble German family from the time of their great grandfather go insane at the age of forty.

Esquirol tells of a family in which for three successive generations the males committed suicide in or near their fiftieth year.

Facts these, stronger than fiction, so fully substantiating Paul Groussac's wonderful idealization that it is worth comparison—indeed we have here the points we have just been considering focussed as by a camera.

The young Austrian noble, the last of a race whose members for successive generations at the period of fullest development had committed suicide, is kept in profound ignorance of his fateful inheritance, and receives every opportunity that new environment and changed conditions of living can offer. An extinct title conferred upon him, educated in England, entering the English navy, he circumnavigates the globe and passes the fateful period in diplomatic service in Washington. There, affianced to the daughter of the minister from Brazil, he sails with her family for that country. On the eve of landing he seizes his fiancée and leaps from the deck, leaving a letter to his physician and guardian confessing the horrible impulse that has haunted him for days, and to which he knows he must eventually yield.

Clearly associated with this question of hereditary predisposition is that other one of marriage. "Burrows, among the first to treat this question as one of grave practical import, expresses himself 'in favor of greater precaution in matrimonial connections,' and quotes from Boethius that in old times when a Scot was affected with any hereditary disease, 'their sons were emasculated and their

daughters banished, and if any female affected by such disease were pregnant, she was to be buried alive.'"

"Maudsley inclines to think that to forbid the marriage of a person sprung from an insanely disposed family might be to deprive the world of singular talent or genius, and so be an irreparable injury to the race of man."

Lombroso gives two typical groups in this connection: First, the Bach family, presenting perhaps the fairest example of healthful mental heredity, produced through eight generations an uninterrupted succession of musicians, many of high rank, inundating Thuringia, Saxony and Franconia during two centuries. At an annual family gathering are found one hundred and twenty of the name of Bach; and among them Fétis counts twenty-nine eminent musicians.

Second, the Juke family, producing in seventy-five years two hundred thieves and murderers, two hundred and eighty invalids afflicted with blindness, phthisis, or idiocy, ninety harlots and three hundred children who died in infancy.

"In what families can we find genius so fatally and progressively fruitful?" (Lombroso.)

Morris, (Translation of the Medical and Chirurgical Faculty of Maryland, 1889) tells of a distinguished American family in which could be traced harlots through eleven generations, and of another family claiming descent, with bar sinister, from Charles the Second, inheriting the physical beauty, the levity, the gallantry and the fine manners of their royal progenitor.

Moreau of Tours said that heredity was found in nine tenths of his cases, but gives no statistics.

Bucknill and Tuke studied with a view of substantiating hereditary transmissions, some six hundred insane families; and out of these found four hundred and forty due to direct inheritance from father or mother, thirteen had insane brothers and sisters and collateral relatives, and one hundred and forty-seven collateral relatives only.

Brigham, out of seventy-nine insane men, found forty-two with insane fathers and thirty-five with insane mothers, and in two cases both parents were insane.

Dr. Langdon Down, in studying two thousand cases, found forty-five per cent. caused by neurosis in parents.

Ludvig Dahl made careful comparative studies of one hundred and sixty-nine idiots and one hundred and forty-one insane. In the former he found fifty per cent. had insane relations—in the latter thirty-eight per cent. whose relatives presented marked symptoms of idiocy and insanity.

Dr. Kerlin in the analysis of one hundred cases found twenty-eight per cent. caused by hereditary insanity and imbecility, and fifty-seven per cent. by neurosis of various kinds.

In my own experience, based upon the careful study of one thousand and forty-four idiots, I find thirty-eight per cent. with a history of hereditary insanity or imbecility, and fifty-seven per cent. of other neuroses.

The following history while incomplete in some details is yet an interesting illustration :

The grandfather, an intelligent man, married a woman who is described as "flighty, nervous and passionate." To them were born seven children, three daughters and four sons :

The first born, a female, normal, married a strong healthy man and had one child, an imbecile girl. Mother now living aged fifty six, in full possession of faculties.

The second, a son now aged fifty-two, married a healthy woman and has an imbecile daughter; only child.

Third, daughter—imbecile—living, unmarried, aged forty-four.

Fourth, son now aged forty-two, married healthy woman, but owing to incompatibility of temper, separated from his wife. Has had five children—one an idiot girl, one died of convulsions in infancy, and another of some kidney trouble. Two surviving children are normal.

Fifth, daughter aged thirty-eight, imbecile, has had an illegitimate imbecile son, father unknown.

Sixth, male, imbecile, aged thirty-six.

Seventh, male, thirty-four, married strong healthy woman—five children the issue—three living, strong and healthy; two dead, disease unknown.

It will be observed that the mental defect is more pronounced in the female portion of the family.

In the second generation two daughters are imbeciles and but one son, and in the third generation, of the four imbeciles, there are three females and one male. The two normal have each an imbecile daughter, and of the two daughters, the normal has an imbecile daughter, and the imbecile, an imbecile son.

The next study is even more suggestive, including seven generations, therefore giving wider range of observation.

The progenitor, insane, intermarrying with good stock had one daughter, normal, who also contracted marriage with stock, as far as known, pure. Here we find the disease, latent in the second generation, transferred in varied form to every member of the third. The record of her five children reads thus:—Son and two daughters insane, son and daughter neurotic.

The fourth generation descends through the female line: the youngest daughter, a neurotic, having four children—two sons neurotic, pronounced dipsomaniacs, one of whom married a woman with neurotic inheritance; issue one male child apparently normal, another son intermarrying with good stock with like result. The only daughter, also normal, married a man of neurotic stock—issue seven children apparently normal.

The record of this same fourth generation descending through the eldest daughter, insane but married into good stock, runs thus:—Male, neurotic, unprincipled; female, neurotic; female, normal; female, epileptic; female, neurotic; male, epileptic; female, normal.

Here, in a generation consisting of fourteen individuals, are six neurotics and two epileptic, with six intermarriages, three partial and three entirely neurotic.

The result shows in the fifth generation about fifty per cent. affected, for of forty-seven individuals there are, insane five, imbecile one, and seventeen neurotics. Seven of the latter intermarrying with their own kind.

In the sixth generation we find evidence of Nature's effort to rescue by the power of prepotency where there is admixture of

healthy blood, or by barrenness, enfeebled vitality, or early death to arrest neurotic transmission.

The twenty-eight marriages in the fifth generation divide into three groups:—

First, normal intermarrying with normal stock.

Second, neurotic with neurotic stock.

Third, neurotic with normal stock.

In the first group we find eleven marriages having issue normal children, but numbering only twenty-two in all; one family of seven, one of four, one of three, one of two, the rest one, and one marriage is barren.

The second group, neurotic with neurotic stock, shows seven marriages with issue twenty children. Of these, five die in infancy, three are still-born, one is imbecile, one neurotic, one an epileptic seduced by a negro gives birth to a mulatto child making the seventh generation, nine are normal.

The third group being the union of neurotic with normal stock, shows of ten marriages ten children normal, one imbecile; one marriage is barren; and of another, that of a dipsomaniac, the two children are still-born.

The entire twenty-eight marriages, with the exception of two, are distinctly *not* prolific, the prepotency of pure blood asserts itself in the first and third classes, while in the second early death cuts off nearly one-half the issue, notwithstanding there yet remains a sufficient proportion of neurosis patent, not to speak of what we have noted of latent power, to continue the gruesome story and to dominate with evil generations yet unborn.



A STUDY IN FORM.

BY MISS L. J. SANDERSON.

A class of twelve boys—average thirteen years of age—can read intelligently, write well, have a fair idea of number, and much general information of common things, from a comprehensive training in the Kindergarten; but in spite of all this show very little practical appreciation of *form* and *size*.

Given a toy horse and a rat, a wand and a pencil, they see at once that one is large and another small—but given two objects nearer alike in size and they see very little difference. If asked to tell about something seen a week ago, they tell about the color, uses, etc., but seem to have no idea of its size unless very large, and little idea of shape. If asked if it was like the piano, or globe, or some other familiar object, perhaps the suggestion might help them out, but as a rule they show that they have not grasped the idea of shape and size.

If an object is placed before them, they give a fairly good description of it, but if given a slate and pencil to reproduce it, they show they have very little idea of form, and the question arises—if they really *see* one side of a rule is a straight line and a plate is a curved line, would they not form it so? For they know how to form all the letters and write well. If they can copy the lines from writing, why not copy the straight lines of a rule or the curved of a plate?

About this time Manual Training was introduced into the school work and they showed to a very marked degree a careless, inaccurate perception and power of comparison. There seemed no intelligent comprehension of length as applied to a rule, except that a yard was a yard with the yard stick, and that three foot rules when placed lengthwise by the yard stick made the same length as the stick. They would say in the most glib manner, "Thirty-six inches, or three feet, make a yard; eighteen inches make one-half yard; nine inches make one-quarter yard" from memory, but could

make no practical application of it when measurement depended upon their perception, judgment and comparison.

Given a piece of wood with straight lines marked upon it to saw, they see the line and *tell* it must be sawed *on* the line, but *saw* a *slanting* line, not seeming to *see* but that the slant is straight. They start on another line, saw two inches and then slant off again and do not see where the slant begins. Just what the child sees is very difficult to comprehend, for he has so little power to show it.

Something must be done. They must be taught to *see* accurately in order for us to learn how much they can reproduce—for the secret of manual training is accuracy. Since the imitative faculty of feeble-minded children is proverbial, why not use it to train the brain to think accurately, the eye to observe and compare accurately, and the hand to do accurately?

Let us begin at the start as though they had no knowledge of form, working from known to unknown—from concrete to the abstract—with daily lessons with simple objects in the school-room and with inches in the manual training room, the lessons in this department confined to a two foot rule—measuring, marking, cutting strings, paper, etc., and a practical illustration of *every* lesson given in both departments.

The lessons which are found on following pages are not planned at the start, but simply developed—step by step—as the brain, eye or hand tells of its need—and the results have proved very satisfactory.

1.—Group a variety of objects, several of which resemble each other in shape, as balls of wood, worsted, rubber, and marbles—squares of cardboard, paper, wood cylinders of pencils, chalk and so on.

Hold up two objects unlike in form asking if they are alike; then two objects alike, asking the same.

Talk about the shape of familiar objects in school-room, the children telling which are like and which unlike in shape. Next, tell objects outside of school of similar shape.

Let each child take the objects in group, arranging all of one shape in a separate group, then all of another and so on. In deal-

ing with *familiar* objects he very soon seems to note the difference in form, but

2.—Take cards with bright colored paper forms upon them and ask each one to group all squares, ovals, crescents, etc., together, and he shows that he groups according to *color*, for he places a red square, a red oblong and a red circle in one group—a blue square, oblong, circle in another group, and so on, showing that *color* produces a stronger impression upon the child's brain than *form*.

3.—We return to one shape only—the round, taking balls of wood, rubber, worsted and the corresponding colored paper forms. The *red* paper form is usually selected first by the child and compared with the object, and little by little he sees that the circular form of red, blue, green or yellow is the same in shape as the many balls.

Next add the square colored paper forms to those just used and let each child try to match one to the object and the paper forms. Invariably he puts the square red paper form upon the red worsted ball or circular red paper form, prompted by the *color*, but soon seeing it is not quite the same, removes it, showing he perceives a difference in form.

4.—Next add all the objects and colored paper forms of square shape and match each to the other, and so on till the variety of objects and paper forms are all matched—and when the child has learned to do this he has learned to compare, and to perceive a difference in the forms of objects.

5.—Put objects and colored paper forms away and use blackboard. Draw in outline with bright colored chalks in irregular order, but uniform size, the plain forms, squares, crescents, oblongs, circles, etc.; taking care that no two of the same shape be of same *color*. Let children point out all of one shape, then another, till all are found. Having learned to do this thoroughly, the eye is trained to recognize the difference in *shape* as a whole.

6.—Use blackboard again. Draw plane forms in different colors in irregular order and in irregular *sizes*. Have children pick out large and small squares, large and small ovals, etc., and the child is trained to see a difference in *shape* and *size*.

7.—Now for parts. Begin with teacher drawing straight, slanting and curved lines, then crooked, wavy, spiral, etc. Illustrate each with objects, letting children show the part of object having a similar line.

8.—To this point the child has been a passive recipient, but as education is shown by doing, the hand must show what the eye sees and the brain directs.

Let children reproduce on slate straight lines, slants, and curves from copy.

Put slates away and find in the colored chalk plane forms on blackboard, the corresponding lines showing that they distinguish a difference in *lines*, the first step in distinguishing parts.

9.—Draw a simple line on blackboard in colored chalk, let children talk about it—being sure that each child sees it for himself. Erase line and have each one draw it from memory. Do this repeatedly until sure each child sees it.

10.—To be sure that each child comprehends this difference in lines, have each one form on the slates what the teacher dictates—four horizontal lines—three vertical lines—seven slanting lines—two curved lines and so on.

11.—Draw a number of lines in colored chalk on blackboard in irregular order, the longest one foot long. Have children take rules, measure the lines in order and reproduce on slates. Do this again and again.

12.—Erase lines from board and slates—put away rules and draw as teacher dictates—a three inch line—nine inch line—seven inch line and so on to find out if each one appreciates a difference in *lengths*.

13.—Next, in order to appreciate corners and angles, take familiar objects in room, books, slates, etc. and colored cardboard forms. Let teacher draw on blackboard with white chalk a right angle or sharp corner and have children find on object a corresponding corner, and then find, among the blackboard figures in colored chalk, the same angle or corner.

14.—Let children reproduce on slates the different corners, copying those made by the teacher in *white* chalk, showing an ap-

preciation of square, round, sharp and blunt corners. Then erase from board and slates and draw from memory.

15.—As a combination of the whole and its parts, give the children pieces of cardboard with pencil drawing of squares, triangles, crescents and other forms having corners and cut with scissors close to line, calling attention to each corner turned, letting each child tell whether it is sharp, round or otherwise.

16.—Cut cardboards with figures upon them having no corners—ovals, rings, circles. These last two exercises are excellent for hand training.

17.—Take chart of lines, corners and plane forms. Have children name the lines pointed to by the teacher, then the corners, and next the plane forms, telling the lines and corners of which they are composed, and find similar ones on blackboards in colored chalk forms.

18.—In order to ascertain if the children have sufficient comprehension of comparative sizes, have them draw plane forms as a whole, beginning with squares, telling how many sides and corners there are in the squares of various sizes designated on the blackboard, and reproduce on slates without a rule—and it is very soon shown that they see a difference in the size.

19. Reproduce in same manner, with colored chalk on blackboard, each child selecting chalk corresponding in color to the square to be drawn. This exercise showing that the child *sees* the *shape*, *size* and *color* of square.

20.—Proceed in same way with all three-sided figures, four-sided figures and polygons, teaching always the simple names—five, six, seven and eight-sided figures, and proceed the same way with circular forms.

21.—Putting aside all colors, slate work and objects, take wooden plane forms, models, and have children tell what each is, its sides and corners, and find that the lesson of form is well begun for they recognize at once the simple wooden form without the aid of familiar objects and color.

22.—Develop the idea of plane surface, using blackboard, floor, window frame, etc. for illustration. Then curved surfaces, apple, globe, ball, etc. Have children tell objects in room having

plane or curved surfaces, also having both, and show objects having outside and inside surface, as cup, flower pot.

23.—Develop idea of faces of solids, using brick, blocks, etc. Compare with solid figures having one face, marble, globe. Let children tell solids having one face and six faces. This must be thoroughly learned before proceeding to

24.—Solid figures. Group together various objects, planes, solids, long, short, thick and thin and show that plane forms have only two dimensions, length and width, while the solids have thickness as well as length and width. Then let children find in school-room everything that has length, breadth and thickness, and tell everything thought of outside of school.

25.—In order to develop ideas of thickness use solid wooden forms *before* the figures are put on the blackboard in colored chalk, as the children by *feeling* of the object can grasp the dimension of thickness more easily. Then proceed to cube, cylinder, cone, pyramid, etc. in same manner as plane forms were taught. Lessons 5 to 21 (omitting 15 and 16) and in lesson 17 using chart for solids. This serves as an excellent review.

26.—Put aside blackboard, colored chalk figures and the wooden forms. Let the children attempt to draw on the blackboard in white chalk from the objects in the school-room having plane forms, a sheet of paper, an envelope, a handkerchief, towel, a soda biscuit, etc., and the hand tells what ideas of size and shape the brain has grasped and the eye perceives.

Day by day the plane forms are drawn. Sometimes it is a slate, or a plate, a tile or a flower pot saucer, the results showing that the child sees them as they are.

27.—To-day a boy brought a branch having three leaves upon it, a dark green, a light green, and one nearly yellow. Each child is asked to take the colored chalk and draw a branch like it, and every one draws a graceful branch with leaves nearly like the model in size, shape and position, but the three leaves exactly alike in color. Ah! here is something we had not considered! He saw the shape, size and position of the leaf, but he saw only one shade of the green.

28.—Pressing the branch for future use, we go back to our

first steps, forming plane forms in outline in irregular sizes and order of different shades of color, one half square dark, the other half light blue, one half circle orange, the other half yellow; convex side of crescent blue, concave side white; two sides of a triangle red, third side pink; two sides of another pink, the third side red, and so on. Then make one form wholly of shades and another wholly of tints. This is kept up till the different shades are quickly noted, then back we go to the pressed branch and the desired result is produced, size, shape, position and colors, and, later on our blackboards blossom with leaves from various trees, while dandelions, buttercups, daisies and clover adorn the school-room, all the work of the children.

29.—Draw other familiar objects in school-room, box, wooden forms, globe, piano stool, flower pot, a tumbler of buttercups, a jar of daisies and a pot of ferns, and the hand tells that the brain has grasped the idea of transparency of glass tumbler and the opaqueness of the earthen jar.

Then vegetables are brought into the school-room as we study about food, and the blackboard decorations consist of squashes, beets, carrots, turnips and other vegetables, all in color.

30.—But the climax of interest and judgment is reached when an animal from the "Zoo" is brought to the school-room in a cage. This, too, must be drawn. The boys seat themselves on the floor about the cage in which is a duck. How the youngsters try to reckon distance from head to tail! How they talk about the curve of his neck! How far is the top of his head from his body? How far does the tail reach out from the body? How long are his legs? and are they nearer to the head than to the tail? How closely they scan the white, plump body and the yellow legs with webbed feet! Surely they see it! Can the hand tell it? We shall see.

A constant race is kept up between the cage and the blackboard; back and forth they go till the *thing* is done. Each excels in some one point. One duck revels in fine webbed feet, another has a most graceful bend to its neck, one has a shapely body, but all are caricatures and it is necessary to write below the attempt, "This is a duck." They recognize their failure, but the lesson

time is passed, the duck must go and the children promised another trial.

31.—The next day the duck comes again. The different points are carefully noted and another attempt made, this time with much better results. The duck is tried every day for a week, at the end of which time it is unnecessary to label it, for the duck tells its own story, *not* in a way that will admit it to the Royal Academy, for it is only a study in form, but the procession of ducks on the blackboard tells that the children see the yellow webbed feet, the short legs, the white oval body, the prettily arched neck and the long yellow bill, and the lesson of form is learned.

32.—Every day after the object lesson the class draws the object or something connected with it. The time allowed is twenty minutes, but if the object is difficult to reproduce, a little longer time is allowed.

The use of colored chalks adds to the interest, and the promise of a prize at the end of the year for the boy whose name is oftenest in the record book for doing the best, keeps brain, eye and hand on the alert.

There has been no attempt at landscape or portrait study, which would be an absurdity for this class of children, but only a study of form as a means to an end, which has proved far reaching, the children showing an ability to observe, to compare and to judge accurately in their various departments of work.



THE THYROID AS A SECRETING GLAND.

BY GAYLORD P. CLARK, M. D.

Professor of Physiology at the Syracuse University, Syracuse,
New York.

The thyroid was one of the first of the so-called "blood glands" to be proved to have a definite action upon other tissues of the body. The embryology and histology of this structure suggest a relationship to secreting glands. It arises early in the developing embryo as an outgrowth from the hypoblast of the ventral wall of the throat, which soon becomes separated as a solid mass of cells from the epithelium of the throat. Later it becomes divided into numbers of follicles, the walls of which are lined with cells, their general appearance resembling that of the cells of ordinary secreting glands. The evidence upon which the present knowledge of its function is based is derived in part from the results of its total removal, and in part from the effects of disease of the gland. The latter may have been on the one hand of such a nature as to practically destroy the function of the gland, and thus be equivalent to its removal, and on the other hand of such a nature as either to increase its activity or alter its character. To this evidence is to be added that from the effects of administration of the gland.

Schiff, in 1856, showed that the gland is indispensable for life. Gull, in 1873, studied a condition in which there is a peculiar mucin-holding infiltration of the skin and subcutaneous connective tissue, and a quite striking change of the intellect in adults, reminding one of cretinism. To this condition he gave the name *Myxedema*. Later, other observers called attention to the fact that, while all organs became more massive, the thyroid glands alone diminished and atrophied. Reverdin, in 1882, observed that removal of the thyroid gland by operation was followed by the condition of myxedema. This suggested that the etiology of myxedema was to be found in an impairment or loss of the function of

the thyroid gland. During the last ten years there has been much study of the effects of removal of the thyroid from various animals, and with the following results: that in cats and dogs its loss is followed by death in a very few days, the intervening symptoms being those of extreme irritation of the nervous and muscular systems, muscular tremors first appearing and passing on into spasms and convulsions; in monkeys, which survive the operation much longer than dogs, the symptoms of myxedema have been observed to develop; in rabbits no effects have been observed. It has been found that the profound effects upon the muscular and nervous systems and the fatal result in dogs may be prevented by a graft of part of the gland in some other place. The development of myxedema in the monkey corresponds with what has in some cases been observed to be the effect of removal of the human gland. Cases have been reported in which removal of the human gland was followed by the typical acute symptoms, tetany and epileptiform convulsions. That rabbits escape the effects of removal of the gland has been explained upon experimental grounds by the fact that there are other small isolated groups of cells in the vicinity of the thyroid, which structurally resemble the embryonic thyroid gland. If special care be not taken to remove these so-called parathyroid structures they may be able to carry on the work when the thyroid is removed. There is, therefore, evidence that removal of the thyroid may be followed by profound disturbance of the nervous and muscular systems, ending in quite speedy death; or, if the animal escapes these acute effects, by marked metabolic changes, notably in the skin; and, further, that incomplete removal of the gland, or complete removal of the thyroid, leaving the parathyroids, or grafting a piece of the thyroid somewhere else, may prevent the symptoms mentioned.

Another condition resembling myxedema has been referred to failure of thyroid function, and that is *Cretinism*, which is sometimes spoken of as congenital myxedema. Sporadic cretinism in children appears to be the analogue of myxedema in adults. Hofmeister and Eiselberg have found that removal of the thyroid from undeveloped animals disturbed their growth and that the development of the bony frame, and particularly the long bones, remained

backward. The dwarfed stature and the massive body are striking physical abnormalities in the cretins. A quite different symptom, complex from that of myxedema and cretinism, is accompanied by an abnormal condition of the thyroid gland, namely, that of the so-called Grave's or Basedon's disease (*Exophthalmic goitre*.) Dr. Starr, of New York, has recently set forth in an impressive way the contrast which exists between myxedema and exophthalmic goitre. The comparative study of these two pathological conditions seems to throw a great amount of light upon the physiology of the thyroid gland. The condition of the eyes, the skin, the circulation, the temperature and the mind are strikingly different in these two diseases. In myxedema the eyes look heavy, the skin is thick, rough and scaly, the growth of the hair is impaired and there is no perspiration, the pulse is slow, small and of high tension from arterial constriction, the temperature tends to be subnormal and the patients experience a sense of cold; mentally they are dull, listless and inactive. With this picture of myxedema that of cretinism essentially corresponds, and to it may be added the dwarfish size and appearance of idiocy, in other words the effects of the disease upon undeveloped rather than upon adult tissues. Inasmuch as myxedema may be produced by operative removal of the thyroid gland, the condition may with reason be ascribed to a loss of function of this organ. Such cases appear to be not only abnormal but *subnormal*—lacking something essential to their normal development and activity. Turning to exophthalmic goitre, the eyes are staring, the skin is thin, soft and fine, the growth of the hair is stimulated, perspiration is excessive, the pulse is rapid, full and large, there is arterial dilation, the temperature tends to be hypernormal and the patients have a sense of heat, a flushing and burning of the skin which they find very annoying; mentally they are alert, emotional and restless. The contrast with myxedema seems to justify the opinion that in exophthalmic goitre there is a heightened activity of the thyroid gland. Such patients appear to be *hypernormal*, as those of myxedema subnormal. This hypothesis is sustained by still further considerations. While myxedema is accompanied by a primary atrophy of the thyroid or by destruction of the glandular elements by

cystic growth (goitre) in exophthalmic goitre the thyroid sometimes shows an hypertrophy of the glandular elements. It is, however, conceivable that the condition in exophthalmic goitre may be due to simple hyperactivity of the cells without multiplication of their number. The recoveries that occur and the variations in the severity of the symptoms suggest that the disease is markedly a functional one.

The results of the therapeutic use of the thyroid gland are in harmony with what has been said and confirmatory of it. It has been grafted in animals and to its action reference has already been made. Extracts have been administered subcutaneously and the fresh gland, or tablets containing extracts of the gland, have been given by the mouth. In myxedema and cretinism its use has been followed by the most wonderful results. The growth and improvement, physical and mental, which the 18-year-old cretin under Dr. Corson's observation has made during a six months' treatment with thyroid extract would seem miraculous, were it not that a scientific explanation can be given for it in the supplying of something, produced by the thyroid, which its tissues had hitherto lacked. If myxedema and cretinism are conditions resulting from lack of a thyroid secretion and are improved and even cured by thyroid treatment, and if exophthalmic goitre is due to an abnormal amount of such secretion, then a thyroid treatment of the latter condition would seem to be decidedly contra-indicated. There is a large amount of testimony not only to its inefficiency as a remedy, but also to its injurious action in this disease. The treatment which has proved most beneficial in exophthalmic goitre has been that which would tend to diminish glandular activity, namely, by use of belladonna, the rest cure, and even removal of a large part of the gland itself. The symptoms of thyroidism from overdosing with the thyroid in cases of myxedema, namely, mental excitement, burning and flushing of the skin, rise of temperature, rapid pulse and exophthalmus, are suggestive of the condition which obtains in exophthalmic goitre. They are produced by substitution of the gland and are the converse of those of myxedema which accompany the loss of that organ. It is noteworthy that the use of the fresh gland or its extracts upon normal animals

is not followed by any visible effects. Intravenous injection of extracts of the thyroid gland produces a temporary fall of blood pressure. As the heart is not affected the fall of pressure must be due to dilation of the arterials. Vascular dilation is one of the conditions noted in exophthalmic goitre.

With such striking evidence of the production of something by the thyroid gland essential to the normal metabolism and activity of other tissues, and which must be carried from the gland in the blood, the question necessarily arises: What is this substance? Various attempts to isolate it have been made. Bauman has recently made the important discovery that iodine is a regular constituent of the body, and specially of the thyroid gland. It has been found that one gram of dried thyroid contains one milligram of iodine. This iodine appears to be a constituent of an organic compound, to which the name *thyrojoдин* has been given. It has been observed that the use of this substance in myxedema has been followed by effects similar to those from the use of the fresh gland. If so it may contain or constitute the healing principle. Iodide of potassium is inactive in myxedema. The physiology of "internal secretion," that is, of gland activity which furnishes the blood with some substances essential to the normal development and activity of the various tissues of the body, is strikingly exemplified in the function of the thyroid gland.



THE ASSOCIATION.

TWENTIETH ANNUAL SESSION, GRAND RAPIDS, MICHIGAN, 1896.

MINUTES.

The twentieth annual meeting of the Association convened in Grand Rapids, Mich., June 10th, 11th and 12th, 1896, with headquarters at the Morton Hotel. Several of the members had been in attendance upon the meeting of the Conference of Charities held in the same city the week previous, and our fellow member, Alexander Johnson, the efficient Superintendent of the Indiana Institution, had the honor of being elected President of that body.

The preliminary meeting of the Association was held in the parlor of an adjacent hotel, there being no suitable accommodations in the Morton Hotel, at 3 p. m., President Dr. Sam'l J. Fort in the chair. As the Secretary, Dr. Rogers, was not present, Dr. Knight was appointed to act in his place. Those present were Mrs. Catharine Brown and Mrs. Geo. Brown, Jr., of Massachusetts; Drs. Carson, of New York; Osborne, of California; Polglase, of Michigan; Powell, of Iowa; Supt. Johnson, of Indiana; with several visitors, among them Dr. C. T. Wilbur, of Kalamazoo, Mich.

There being no accurate record of committees owing reports these were dispensed with. Dr. Fort presented a memorial upon Dr. B. A. Turner, of Owings Mills, Md., which was referred to the Committee on Publication, and, there being no further business before the Association, it adjourned until 8 p. m.

Evening session, 8 p. m. The President called the meeting to order at 8 o'clock and presented his annual address, which was referred to the Committee on Publication, and, as there were so few members present, it was decided to adjourn and defer the discussion of the leading points until the next meeting. Adjourned until 9 a. m., Thursday.

Thursday, June 11th. The Association was called to order at 9:30 a. m., by the President.

The following papers were read and discussed :—

"The Thyroid as a Secreting Gland," Gaylord P. Clark, M. D., of Syracuse, N. Y.

"A Case of Sporadic Cretinism," Dr. Wygant, of Syracuse, N. Y.

"Some Studies in Heredity," by Dr. Barr, of Elwyn, Pa.

It was decided at this meeting to condense the remainder of the scheduled work of the Association into the next two sessions, and the President thereupon appointed as Committee on Time and Place of next meeting Drs. Osborne, Knight and Mr. Johnson; Committee on Nominations, Drs. Carson, Powell and Polglase; these committees to report at the evening session, after which the Association adjourned until 3 p. m.

Afternoon session. The Association was called to order by the President at 3 p. m.

Papers as follows were read and referred to the Committee on Publication:—

"A Study in Form," by Miss L. J. Sanderson, of Waverley, Mass.

"The Latent Tendency to Convulsions after a Primary Attack," by Dr. J. W. Bailey, of Faribault, Minn.

"Training Schools for Attendants in Schools for the Feeble-Minded," by Dr. Delia A. Howe, of Ft. Wayne, Ind.

After the discussion of these papers the Association adjourned until 8 p. m.

Evening session 8 p. m. The Association was called to order by the president and there being no other papers for discussion the report from the Committee on Time and Place was called for.

Dr. Osborne, as Chairman of the committee, reported that the next meeting would be held at the Iowa Institution, Glenwood, Iowa, the time to be announced by the Superintendent, Dr. Powell.

The committee on nominations reported:—

President, Dr. M. W. Barr, Elwyn, Pa.

Vice President, Dr. Geo. Brown, Barre, Mass.

Secretary and Treasurer, Dr. A. C. Rogers, of Faribault, Minn.

It was voted that the retiring President, Dr. Fort, who had assumed the office of Secretary during the absence of Dr. Rogers, was authorized to pay the charges for the meeting room and pre-

sent his account for printing, etc., to the Treasurer upon his return. It was also voted that the treasurer be authorized to make the annual assessment not to exceed \$5.00.

Under reports from states one was read from Dr. J. Q. A. Stewart. Under election of honorary members, Dr. De Forest Willard, Philadelphia, Pa., Dr. Walter Channing, Brookline, Mass., and Dr. Henry Cattell, of the University of Pennsylvania, Philadelphia, and proposed by Dr. Barr, were unanimously elected. There being no further business before the Association it adjourned sine die.

Letters from the following members were received and read at the first meeting:—

Dr. Smith, Lincoln, Ill.

Dr. Howe, Ft. Wayne, Ind.

Dr. G. Mogridge, Glenwood, Iowa.

Dr. M. J. Dunlap, Vineland, N. J.

Dr. M. W. Barr, Elwyn, Pa.

Dr. A. W. Wilmarth, Norristown, Pa.

Dr. F. F. Corson, Vineland, N. J.

Dr. W. B. Fish, Wheaton, Ill.

Dr. H. C. Rutter, Gallipolis, O.

Dr. A. H. Beaton, Orillia, Ontario.

Dr. Kate Salmon, Syracuse, N. Y.

Dr. G. A. Doren, Columbus, Ohio.

Dr. W. E. Fernald, Waverley, Mass.

Dr. J. Q. A. Stewart, Farmdale, Ky.

Mrs. E. C. Seguin, Orange, N. J.

Miss Bancroft, Haddonfield, N. J.

PRESIDENT'S ADDRESS.

Members of the Association:—

The functions of the presiding officer of this Association, the honorable office with which you have honored me, and which honor I assure you is thoroughly appreciated, not only includes the proper conduct of detailed and routine duties of a chairman, but the preparation and presentation of an annual address. Cush-

ing's hand-book of parliamentary law can easily assist one to properly handle a regular order of business, but one has to depend upon his own grey matter for the production of a fitting address that shall be of interest and perhaps of value, and this evolution of ideas sometimes fails of its purpose; therefore, in preparation for a failure, I beg beforehand for your kindly tolerance and charitable forbearance for the imperfections and shortcomings of what is to follow.

Let us first in considering what has been done during the past year, go a little further back than May 1895, the date of our last meeting, for we are rounding out our second decade of existence as an Association, and will soon complete the first half century of work for the feeble-minded. Though the idiot, using the term in its broad sense, has been recognized as an object worthy of attention from an extremely early period, some studies having been made as early as 1799, it remained for this century to see the genius of the elder Seguin expanded and developed in this country and abroad by later philanthropic scientists into the modern Institution and training school, wherein the idiot has found not only an abiding place but he has been accepted as a being afflicted and in need, where he has been studied scientifically, and has received not only his sustenance but care and education and training, administered by those in whom even the lowest grades recognized a loving solicitude that has borne no little share in bringing light to his miniature senses.

Standing now upon the threshold of the second half century of this, one of the grandest life works that man or woman can possibly adopt, what greater incentive to earnest whole-souled endeavor can be found than the history of the intervening years between 1854, when the corner stone of the first American State Institution was laid in Syracuse, and this, the 10th day of June, 1896, a short span of years, that has seen twenty-four state and fifteen private institutions spring from this nucleus, plants representing millions of dollars, the erection of monuments in brick and stone that shall endure for all time to the honor of those of our brothers, some gone before us to that bourne from which no traveler returns, others who are still with us who represent the pioneer

explorers along the trail blazed by Seguin. During these few years it has been demonstrated beyond all question that the Institution is no longer an experiment; it has been demonstrated that public interest is developed to the extent that money can be had to further enlarge the scope of the work, and it is upon us as Superintendents that the task devolves of properly guiding this interest.

Twenty years ago this summer this Association came into existence, and in less than a generation Death has been busy in our midst. Seguin, Wilbur, Brown, Knight, Richards, Kerlin, talented, earnest, devoted men, whose genius shines out as an inspiration, whose work is history, whose monuments are represented by the homes where so many hundred afflicted beings are sheltered, these men have all gone and left to us their work which we shall in turn hand to our successors, for, alas! until we shall find out true methods of prevention of this deadly mental blight, that seems now an inseparable concomitant of our higher civilization, the idiot will always be with us, a problem and a care. We can only hope and strive so that when our turn comes to lay down the work, our results shall be as great as theirs, and we merit, as they have, the plaudit, "Well done thou good and faithful servant."

For years the idiot has been treated from a purely medicopedagogical standpoint, and this almost necessarily owing to the peculiar conditions under which he was first studied. The classic "wild boy" was tamed and trained, if sick, treated *secundum artem*, but little attention was paid to him either histologically or pathologically; that is, he was approached from the standpoint of a pure "*lusus naturae*," and Seguin's physiological system contemplated almost entirely the production of a healthy physique, and the development of whatever mentality was present, by the methods unquestionably correct in their construction and which must be the foundation of any and all successful present and future systems of education; but the plan of the modern Institution must be arranged to meet the requirements of the enormous and constantly increasing army of defectives with whom we have to deal. We have developed the science of training to a fine degree; we are prepared to treat disease as indications may arise; the problems of hygienic construction are being solved; but we are facing a problem of far

greater importance than all these ; a problem that demands solution every day with increasing force ; the problem of what shall be done with the ninety thousand defective inhabitants of this country, now scattered in our families, our almshouses, our reformatories, our houses of correction, our jails, our asylums for the insane, anywhere, everywhere, so long as under some sort of restraint, regardless of environment, reproducing their kind and adding other recruits to this awful rank and file of defectives, under no training, receiving no care worthy of the name. You are all familiar with the story ; there is no Superintendent who does not have a long file of names, the owners of which are daily knocking at his door for admission, and it lies with us to a great degree how these unfortunates can best be taken care of, for who can better suggest ways and means than men who are and have been devoting their lives to just such work as will give them the requisite knowledge to render the answer. We have also to consider another equally difficult problem, and that is the prevention of idiocy ; and this merits more than the passing attention that my time will permit ; preventive medicine is to be the medicine of the future, and when we have found a means of shutting off the production of idiocy, the care of those left is of minor importance.

In view of these facts, it is seen that the Superintendent must cease to be a mere director. The wonderful discoveries of modern histology, biology and pathology, as portrayed in the literature of the past year alone, throw open an almost virgin territory to the scientific investigator. The work already done in the careful study of anthropology, anthropometry, psychology and sociology, is simply wonderful, and the anatomy of the nervous system will need to be re-written when the researches of late investigators, using the new stains, are collated. With all these achievements in view, we, who have under our eye the entire number of idiots now receiving intelligent care, must not permit this wealth of material to pass without more than speculation or theoretical attention ; theory must go hand in hand with the microscope and scalpel.

The lines of demarcation between varieties of abnormal man are being more clearly defined every day ; the intelligent work being done by our confreres in sociology, psychology and criminol-

ogy is showing us more clearly than ever before the anastomosis, if I may be permitted to use the term, of the condition known as idiocy, imbecility, or feeble-mindedness and other conditions of degeneracy or defective organism, such as crime, prostitution, alcoholism, etc. No doubt another decade will define these relationships more clearly, and point the way to a more intelligent treatment, that shall include the legal life control of such defectives and the ultimate prevention of many, if not all, of such classes.

I would throw no discredit upon the purely pedagogical side of our work, for I firmly believe that the science of teaching has been broadened in schools for the normal child, by the results attained in our schools for the abnormal, and if in no other way, the lesson taught by our schools of the value of specialized training has borne good fruit in the outside world. But while we have not been lacking in our teaching, and our school work has not gone back, have we not reached a point where we can more easily make a prognosis of our inmates, and draw the line more closely where school training shall begin and where it shall end? Are we not in position to say most emphatically that certain classes of our inmates shall receive only such mental training as shall enable them to earn such part of their maintenance as they are capable of earning, such mental development as will only fit them to fill their niche as a wage earner, and not fit them to demand what their moral obliquity renders them improper subjects to receive?

The value of manual training in connection with school training in its strict sense, or standing on its own merits, is receiving more attention each year, and I believe properly, for surely, if we contemplate the sequestration of the entire number of imbeciles in the country, they should be fitted to earn as much of their living as possible.

Questions of importance in this line will be discussed at this meeting, notably the one "The farm as an adjunct to the school." The discussion of such a subject cannot help be of great value to new institutions, as they open their work in states yet to come into line.

I have noticed with some concern a growth of the tendency of our State Institutions to draw comparisons in the matter of econo-

my, particularly in regard to the reduction of the per capita cost of maintenance of their inmates. It seems pertinent right here to insist that such education of the public may later on be an argument against rather than for the extension of our work. While obligation rests upon every servant of the people to save every cent of the people's money possible, to run public Institutions in the most economical manner consistent with propriety, the mistake I see is in classifying the economy of a reformatory or public Institution where human beings are incarcerated for punishment or incorrigibility, with the economy of a home that is next door really to a hospital. Our inmates are sent to us not because of their own fault or misbehavior, but because of their misfortune and affliction, and they deserve the best, regardless of cost. It naturally goes without saying that there is no Institution in this broad land that does not treat its inmates properly. I am not suggesting even the possibility of such a thought, but while one public Institution can reduce its per capita cost to less than \$200 per annum, another may not be able to get down to such figures from sheer force of circumstances, yet the Board of the one prints its figures with a sense of congratulation, and the Board of the other tries to scale its expenses to meet the lower figures; something has to suffer under such circumstances, and I only plead for an adjustment upon one broad plan, the foundation of which shall be the fact that our charges are to have the very best of everything, from food to attendants, and let the per capita per annum take care of itself. The private Institution comes into this matter very largely, and I believe that these personal undertakings should receive a much greater share of interest from the State Institutions than they do at the present time. There are at present fifteen of these private homes in the United States, and all are more or less successful, but no private Institution can or would care to enter into competition with a State institution in the matter of charges; yet many of these have to do so every year. If every State Institution was to keep on hand a list of the private Institutions, with circulars, etc., and would refer all their applicants able to pay \$250 per annum and upwards to this list, it would be but a short time before all of our private homes would be full. As a matter of fact I think the func-

tion of the State Institution is entirely separate from the care and custody of a pay patient, just so long as there is a vacancy in any reputable private home, and I can see no reason why this Association should not investigate by an examining Board every private Institution devoted to the care of the feeble-minded and epileptic, regardless of local Lunacy Boards, and give them each a license, if deserving of the same, that would entitle each to receive the overflow of pay patients from the State Institutions. Quite recently the daily press, notably the New York papers, have devoted any amount of space to wonderful stories concerning idiots entirely restored to health and mentality by surgical means. One notable instance was the case of a child eight years of age, an imbecile of low grade from birth, utterly unconscious of the outside world; this child had an enormous opening made upon the lateral aspects of each side of its skull, and upon recovering from the anaesthetic, smiled at the mother, and faintly but audibly whispered "Mamma," at the same time throwing its arm around the mother's neck. A beautiful picture of the saving grace of surgery, that placed all of us as back numbers, and relegated our knowledge to the dim and dusty past; the skill and science of the daring surgeon who was successful, simply saying "the impossible has been achieved and he who cannot hereafter go and do likewise must resign his title and seek another livelihood." You will have occasion to discuss this very subject later in programme, and I trust some plan may be formulated by which the results of our deliberations can be thoroughly disseminated throughout the country.

That our work has progressed cannot be denied; new Institutions that have come into existence since last year, the tide of human interest in the feeble-minded has increased, gaining every day some addition from new streams that overleaping all obstacles join the main flood; but can we say that all has been done that could be done? Has this Association developed and grown with each succeeding year? Has its influence grown to such an extent that Legislation has been controlled, or the scientific world awakened to the fact that such an Association exists?

This Association represents to-day the labors of some of the greatest philanthropists of the century; it represents the sum and

substance of American knowledge pertaining to the feeble-minded; it numbers among its members the only experts in this line of work in this country; its transactions contain, with but few exceptions, the literature written upon the subject of idiocy, imbecility and their associated mental, moral and physical defects; we have in all this a tremendous power for good; but, fellow members, are we using this power to its fullest extent? Are we influencing Legislation? Are we giving to the scientific world any of the vast material of interest to the histologist, the biologist, the pathologist? Are we even keeping pace with our confreres, the psychologists, the sociologists and kindred workers?

With all due respect I say to you to-night that we have been living upon the past, and upon the threshold of our third decade I ask you to pause and consider where and how we can attain our proper position in the ranks of progress, and secure the influence rightfully our own.

It seems to me that we are at the parting of the ways, and we must choose the path which shall lead on to success or the one which shall lead to dissolution; and in view of this I most respectfully ask to lay before you for discussion and action a scheme of re-organization that seems to me to offer some inducements for your consideration.

First, in view of the great changes in our work since the Association first came into existence, it is necessary for us to settle what shall be the criterion of membership. The medical man twenty years ago was the only accepted head for an Institution, none other was considered to be a proper candidate for such a position, and in some views of this point there are many arguments in favor of such appointments, but in view of what has been done in organizing and development of several of the Institutions now doing grand work under the supervision, control and management of non-medical officers, is it not our manifest duty to throw open our Association to all heads of Institutions, be they medical men or not? I would not go on record in this matter entirely as complacent to the eligibility of a non-medical man to the Superintendency of any Institution wherein are grouped a defective class of any description. Personally, I firmly believe that no such Insti-

tution should ever have a head officer not a medical man, for the very simple reason that men, however capable otherwise, cannot approach the subject of care, training and true scientific study of such defectives without the preliminary training afforded by the medical school. This I say with all due respect to our non-medical brethren, who, it must be said in justice, have made wonderful records in their respective Institutions. Be this as it may, as an Association we have to deal with facts, and these facts show us that our title is anomalous if non-medical Superintendents are admitted as members, and I venture the assertive that no one of our members would consent for an instant for our organization to lose these very men; hence it seems to me that we must change the title of the Association to make it accord with our membership. In this connection it should also be considered, that any organization to succeed and be of value either to itself or the outside world must draw the line somewhere, and I respectfully suggest that if your body see fit to further act upon this matter, that official connection with an Institution in a capacity of no lower grade than Assistant Superintendent be admitted to active membership; it is easy to have a list of honorary members, who, in few instances do more than acknowledge the notification of their election.

The great divergence of our individual daily labors, seems to me to make it necessary that we shall adopt a more definite plan of bringing together our valuable resources. We represent, tonight, Gentlemen, as an organization, the executives of all American Institutions. having under our eyes the entire number of feeble-minded and a large percentage of the epileptic class, who are receiving care and treatment for study and research. Think, for an instant, of this vast mine of valuable material, out of which we are evolving at present four papers only for our annual meeting:

I know very well how hard it is to get time to prepare a paper, to say nothing of original work. Not one of our number has the time he should have for this work, and not one of us but *would* do if he could. Is it not our duty as an Association to so work together that this time for study and research shall be obtained? Of what use is an organization if we cannot use its influence for

reform? I say to you, fellow members, that we are not getting from this Association the power that we should have; it should be within our reach to say to the public, to the legislatures, to congress, political influence *must* not intrude in these Institutions for the feeble-minded and epileptic classes; its deliberations should bear the stamp of earnest, heartfelt enthusiasm and knowledge gained by the microscope and scalpel, as well as that evolved by years of experienced development of theories, and it lays in our hands to develop our latent power until we obtain the recognition that is rightfully ours.

It goes without saying that the central organization should be retained, but to further closer association between us as individuals, I am of the opinion that hereafter we must operate in sections, not only to draw us closer together personally, but to simplify and at the same time extend our field of research and keep up with the march of modern progress. I therefore suggest that we decide first, upon an annual date for our meeting, that shall not conflict with the dates of any other organization, in which we may be personally interested, and that said date shall be claimed in the calendar of annual meetings of kindred organizations. Second, upon a meeting place each year that will be satisfactory to all members, preferably in the larger cities and those centrally located; third, upon the creation of as many sections as will properly cover the field of our work, for each of which may be appointed a supervisory committee of one or more members; the chairman of each section and his committee to prepare a section programme for each annual meeting, and the same to be incorporated in the annual programme; each section to occupy an entire session of the annual meeting, and the number of sessions to correspond with the number of sections, and as many more as may be deemed necessary to properly conduct the business of the Association.

It appears to me that such a plan will at once harmonize all the elements of our Association and bring out more valuable work than has hitherto been accomplished. The number of papers presented annually would be increased and properly classified; there are some of our members interested in psychological and sociological studies, others who are interested in histology and pathology,

others in purely medical research, others again in purely educational matters; the section system brings together those who, while naturally eager to see the work properly developed, are only willing to venture suggestions or results of study along lines which are at once interesting to them personally, and which environment may have given them exceptional advantages to study.

I am also of the opinion that our Transactions would under such a system become an extremely valuable collection of material, and in this connection I suggest the appointment of an Editor from among our number who shall serve without pay, and the employment at each annual meeting of a competent stenographer to assist the Secretary. I can see no reason why in time our Transactions should not become the official organ of our Association, to be published quarterly and made to pay for itself, rather than to be as it is now a drain upon our slender exchequer.

In conclusion, fellow members, let me say that during the past year it has come to my knowledge that there have been in the past various frictions over real or fancied injuries; a lack of harmony among our members and a corresponding loss of interest. At the dawn of the third decade of our existence is it not possible to let the past sink into its grave without a stone above it to mark where it lies? Surely those of our number who have solved the question that we must each in turn solve—surely were they here to-night they would say, "let all differences be buried so deep that a resurrection is impossible;" shall we not let the grand and glorious work done by these departed ones remain alone as history, and we who are left, shoulder to shoulder, strong in sympathy and fraternity, fight hard to bring our Association to the front?

What I have said is no doubt open to criticism, but I trust that in discussing the main points, if they are deemed worthy of such notice at your hands, you will permit me to solemnly assure you that my motives in thus taking up your time have been of the best; I could not as a man, or as a member of an Association of which I am proud—with the highest office of which you have honored me—I could not resist the temptation to present this appeal for your consideration, in all kindness, with malice towards none and a genuine honest fraternal regard to every member of the Association.

JOURNAL OF PSYCHO-ASTHENICS.

VOL. I.

SEPTEMBER, 1896.

NO. 1.

ANNOUNCEMENT.

This first number of the *Journal of Psycho-Asthenics* comes to its readers with full confidence in the worthiness and necessity of its mission, but with no unalterable plans as to the best methods of accomplishing it. Its purpose shall be to assist those who are laboring for or are interested in the welfare of any portion, however small, of that great army of feeble-minded and epileptic folk.

In our institutions there is a wealth of material that attracts the interests alike of Physiologists, Psychologists, Alienists, Teachers, Sociologists, Political Economists and Pathologists. On the other hand, managers of institutions, public and private, physicians and teachers both in and out of them, are looking anxiously to specialists in all these lines to give them light for the obscure places in their routine work. The current literature we have—meagre at best—is scattered through various periodicals, American and European, not uniformly accessible to all of the profession.

It will be the aim, then, of this journal to collate from all available sources any and all original and selected articles and items of information that will be of special value and interest to the profession; in addition to that presented at our annual meetings, and publish the same with the latter. It is also hoped that the existence of a regular publication of this nature will stimulate an increased interchange of ideas among workers through its mediation. The *Journal of Psycho-Asthenics* should be the repository of the *latest and best* of its kind. Whether it proves to be such will depend upon the degree of interest taken in it by the members of our association and the effort they exert to direct suitable material to its columns.

Inasmuch as the term Psycho-Asthenics will not be found in any dictionaries, its appearance as a new word justly calls for an explanation—if not for an apology. This must be found in the fact that there is no term in universal, or even very general use that implies a *knowledge* of that condition which is termed Idiocy or Feeble-Mindedness; and even in the use of these terms as applied to conditions, custom varies as to which is generic and which specific.

By bringing into use well known fixed roots that indicate by their form and arrangement the use intended, accurate expression at least will be realized so far as the term is approved and adopted.

The study and treatment of epilepsy is thus happily included, it being such an important factor in etiology of mental enfeeblement.

NOTES ON INSTITUTIONS.

The following reports have been received for 1895:

IOWA INSTITUTE FOR F. M. C., GLENWOOD.

The Asylum Building referred to in our last report has been completed and occupied since Jan. 1st, 1895. It provides for 150 beds and ample day rooms for the inmates, with complete provisions for kitchen service and accommodations for officers and employees. The building is also provided with its own steam plant, but the electric light is generated at the central station. The completion of this structure marks one of the most important changes that has occurred in the history of the Institution, permitting, as it does, the more positive classification. The line dividing classes yearly becomes more distinct and prominent. The cost of the building and furnishing, \$40,000. My impressions grow stronger yearly in favor of permanent detention of all classes and that the line of improvements should be made with this idea kept in view. As the number of epileptics becomes better known and the character of their malady understood, sentiment continues to favor the separate colony plan. Efforts will be made at the coming legislature to increase the custodial and asylum divisions, leaving the present capacity of the school department as it now stands to accommodate about 400.

There is nothing new in the line of school work to present except to emphasize the advantages of the training school for teachers. I refer simply to what is termed teacher's meetings which have been kept up in this Institution for years; more recently adopting a more thorough course of training with selected subjects or text books; pedagogy, psychology, physiology associated with short lectures, history of Institutions, talks on daily work. Test examinations are held during the year with recorded results and diplomas or certificates of proficiency granted at the end of a two years' course. This course develops qualifications that become

prominent factors as aids in studying the history of the class of dependents.

A trained and thinking teacher, who is so constantly dealing with the varied types of humanity as found in an average school-room, must be a great help to the medical expert in making up case history.

The present roll-call in our Institution is 567; boys, 332; girls, 235; with 23 applicants notified of their acceptance. By September it is expected that the population of the Institution will be recorded at 600.

NOTE.—On Aug. 29th, after this report was received, the whole of the administrative building was destroyed by fire, caused by lightning. No lives were lost. A report of the work of rebuilding is expected for the next issue.

A. C. R.

REPORT OF NEW JERSEY TRAINING SCHOOL AT VINELAND.

Since no report of our training school was made at the Ft. Wayne meeting perhaps this report should cover the last two years. They have been years of much prosperity, and darkened only by one disastrous fire. A lady from Rhode Island, Jane S. Robison, left us nearly \$8,000. The Directors planned therewith to erect the Jane S. Robison Memorial Cottage at a cost of about \$16,000. On February 25th, 1894, when the building was nearly completed, and occupied by five employees and ten children, the beautiful cottage was burned to the ground, and, unaccountably to us all, the engineer and his wife, the laundress, perished in the flames. The relatives recently entered suit against the Institution for \$20,000 damages, which was non-suited promptly by the Judge at the last term of court. Appeal has been taken. The insurance on the building was \$8,000; with that sum the Directors proceeded, after a few months, to re-build. To-day the cottage is finished a second time and occupied. The steam laundry was also burned. That has been replaced in a much improved shape. Several acres of land have been purchased, a new and beautiful entrance made to the grounds, our barn has been finished, the grounds have been greatly improved in every way. A much needed extension to a cottage has been completed, a combined carpenter and paint shop and hose house is being erected, and also a \$6,000 hospital is nearly ready for the roof.

Our increased number of pupils, 154 boys and 63 girls, 217 all told, together with the additional accommodations we have secured, have made it both necessary and desirable to re-organize our methods of administration. This has also been done during the past year, and with new equipments and a fresh force of workers, the outlook for the coming year in every department, administrative, medical and educational, is the brightest by far in the seven years' history of this work.

We hope to make a greatly needed extension to the Wilbur Cottage, in which most of our girls are, during the coming Fall, and next Spring to erect a combined school house and assembly hall. Two legacies of \$5,000 each will probably come into our treasury, one of them in the not distant future. Other gifts have been promised to us, which promises give us courage to move on rapidly.

Twelve (12) physicians are now on our medical staff. I have long desired to have a lady physician on the staff, and during the past year, Dr. Ida E. Richardson, of Philadelphia, has been appointed gynecologist. Dr. F. F. Corson has been appointed resident physician during the year. He was a classmate of our Chief of Staff, Dr. Chas. K. Mills, and came to us after ten years of successful institutional experience, chiefly with the insane. His experience and ability and character have already impressed the work, and have given us much improved service.

THE STEWART HOME, FARMDALE, KY.

The report for the Stewart Home, a private institution for the care and training of persons of backward mental development, will we hope show some improvement over last year.

This institution, the only one south of the Ohio river, is situated six miles from Frankfort, Ky., and was formally known as the Franklin County Springs, and for many years afterwards as the Kentucky Military Institute.

Situated, as it is, in the most healthful, beautiful and picturesque portion of the State, it commands all the advantages which such a location indicates. The buildings, erected at a cost of \$100,000, are admirably adapted to the purpose and the architectural and horticultural taste displayed in the buildings and grounds commends the establishment to every visitor. There are

three large buildings, the "Main," "North" and "East," forming three sides of a square. They are two stories in height, substantially built of brick, heated by steam and provided with necessary bath-rooms and closets to insure comfort to the inmates. The "North" and "East" are alike and contain twenty-four rooms each, these open on spacious galleries and are well ventilated.

The grounds contain 125 acres of rich "blue-grass" land, 50 of which are now under cultivation with prospects for a good yield. The mineral springs contain lime, magnesia and iron.

We have now in the institution 30 patients.

As to our routine work we have made very little change, however, we are giving more attention to the industrial departments than we have heretofore, believing that they, in connection with the school department, tend to develop the mental and physical condition of the child more satisfactorily than can be otherwise done; this, after twenty years' experience, is our settled conviction.

THE OHIO HOSPITAL FOR EPILEPTICS AT GALLIPOLIS

was opened Nov. 30, 1893, under the management of H. C. Rutter, M. D. Up to the present time 850 patients have been admitted, ranging in age from 6 to 75 years, and of this number Dr. Rutter reports that 75 per cent. have been improved, some greatly so, and some permanently cured. This improvement, Dr. Rutter says, is shown not only in the diminished number of epileptic seizures, but in improved habits, refinement in manners and dress, by greatly elevated standards of ethics, by pronounced increase of mutual forbearance, by far greater disposition toward useful and healthful labor, and in the children and youth by intellectual advancement.

The progress of the work at both Gallipolis and Sonyea will be watched with much interest by the states now considering State care for epileptics.

NEW YORK STATE CUSTODIAL ASYLUM FOR FEEBLE-MINDED WOMEN.

C. W. Winspear, Supt., reports a year of progressive prosperity for his institution, with many important material improvements in buildings, roads, cement walks, etc.

THE ROME STATE CUSTODIAL ASYLUM OF NEW YORK

was opened May 1st, 1894; Superintendent, Dr. J. F. Fitz Gerald. Their grounds and buildings have a total acreage of 350½. The present capacity of buildings, 350; 225 men and 125 women.

THE MICHIGAN HOME FOR FEEBLE-MINDED AND EPILEPTIC is located at Lapeer, under the charge of W. A. Polglase, M. D. The present buildings consist of two three-story cottages, each having a capacity of one hundred.

MARYLAND ASYLUM AND TRAINING SCHOOL FOR FEEBLE-MINDED CHILDREN.

Dr. L. Gibbons Smart has resigned his position as Superintendent at Owings Mills, and will practice medicine in Baltimore. Dr. Smart, during his Superintendency, introduced the thyroid treatment with beneficial results. Dr. Henry J. Hebb has been appointed to succeed him temporarily.

MEMBERSHIP OF THE ASSOCIATION OF MEDICAL OFFICERS OF AMERICAN INSTITUTIONS FOR IDIOTIC AND FEEBLE-MINDED PERSONS.

Owing to the errors in previously printed lists of names of members of the Association they are presented here with all the corrections reported:

ACTIVE MEMBERS.

- | | |
|--|---|
| Archibald, O. W., M. D., Jamestown, N. D. | Knight, Mrs. H. M., Lakeville, Conn. |
| Armstrong, J. T., M. D., Beatrice, Neb. | Knight, George H., M. D., Lakeville, Conn. |
| Byers, H. P., M. D.,* Fort Wayne, Ind. | Knight, Robert, M. D., Lakeville, Conn. |
| Cancroft, Margaret, Haddonfield, N. J. | Knight, Mrs. O. H., Fayville, Mass. |
| Carr, M. W., M. D., Elwyn, Pa. | Morris, A. H., Knightstown, Ind. |
| Seaton, A. H., M. D., Orillia, Ont. | Morse, D. A., Columbus, O. |
| Blackie, Geo. S., M. D.,* Nashville, Tenn. | Mogridge, Geo. M., M. D., Glenwood, Ia. |
| Brown, Geo., M. D.,* Barre, Mass. | Miller, A. M., M. D., Lincoln, Ill. |
| Brown, Mrs. Catherine, Barre, Mass. | Noyes, J. L., Faribault, Minn. |
| Brown, Geo., Jr., M. D., Barre, Mass. | Osborne, A. E., M. D., Eldridge, Cal. |
| Brown, H. B., M. D., Lincoln, Ill. | Powell, F. M., M. D., Glenwood, Ia. |
| Burtch, H. M., M. D., Salisbury, Conn. | Polglase, W. A., M. D., Lapeer, Mich. |
| Bicknell, E. P., M. D., Indianapolis, Ind. | Rogers, A. C., M. D., Faribault, Minn. |
| Carson, J. C., M. D., Syracuse, N. Y. | Rutter, H. C., M. D., Gallipolis, O. |
| Conwell, J. A., M. D., Vineland, N. J. | Seguin, E., M. D.,* New York City. |
| Corson, F. F., M. D., Vineland, N. J. | Seguin, Mrs. E. M., Orange, N. J. |
| Cox, Jean W., Haddonfield, N. J. | Stewart, J. Q. A., M. D., Farmdale, Ky. |
| Doren, G. A., M. D., Columbus, O. | Smith, W. H. C., M. D., Lincoln, Ill. |
| Doren, Mrs. G. A., Columbus, O. | Tarbell, Geo. G., M. D., Boston, Mass. |
| Dunlap, Mary, M. D., Vineland, N. J. | Turner, B. A., M. D.,* Owings Mills, Md. |
| Fish, William B., M. D., Wheaton, Ill. | Von Sweringen, B., M. D., Fort Wayne, Ind. |
| Fernald, W. E., M. D., Waverley, Mass. | Wilbur, Harvey, B., M. D.,* Syracuse, N. Y. |
| Fort, S. J., M. D., Ellicott City, Md. | Wilbur, C. T., M. D.,† Kalamazoo, Mich. |
| Fitz Gerald, J. F., M. D., Rome, N. Y. | Wilbur, Mrs. C. T., Kalamazoo, Mich. |
| Harrison, Rev. S. O., Vineland, N. J. | White, J. W., M. D., Knightstown, Ind. |
| Gillette, Philip, Jacksonville, Ill. | Wilmarth, A. W., M. D., Norristown, Pa. |
| Green, H. M., Lawrence, Kan. | Willetts, N. L., Newark, N. J. |
| Gundry, Richard, M. D.,* Cantonville, Md. | Wiles, C. K., M. D., Kansas City, Mo. |
| Hathaway, Kate A., M. D., Syracuse, N. Y. | Wiley, C. R., M. D., Vineland, N. J. |
| Howe, Delia E., M. D., Fort Wayne, Ind. | Williams, Mrs. Thyra C., Haddonfield, N. J. |
| Jacob, B. F., Knightstown, Ind. | Winspear, C. W., M. D., Newark, N. Y. |
| Johnson, Alexander, Fort Wayne, Ind. | Williamson, Mrs. E. E., Elizabeth, N. J. |
| Kerlin, Isaac N., M. D.,* Elwyn, Pa. | Watson, James, M. D., Vancouver, Wash. |
| Knight, Henry M., M. D.,* Lakeville, Conn. | |

* Deceased.

† Resigned.



(Before Treatment)



(After Treatment)

A CASE OF SPORADIC CRETINISM.

Journal of Psycho-Asthenics.

VOL. I.

DECEMBER, 1896.

NO. 2.

ORIGINAL ARTICLES.

A CASE OF SPORADIC CRETINISM.

Reported by Dr. Julia St. J. Wygant, Syracuse, N. Y.

The patient presented is a girl of 18 years, but with the physical and mental development of a child of four. The family history is good; parents Americans and not blood relations. The mother tells of a morbid interest excited in her by a dwarf newsman, whom she often saw in the latter part of gestation, and which she gives as one reason for the child's condition. Patient was born in Brooklyn at full period of gestation; delivery was normal but difficult owing to the large size of the child.

She was three years old when a peculiarity was first noticed, as she had made no attempt to talk. Walking began at six, and talking at ten years of age. We have no record of the dentition, or any other data up to the time when she entered the Institution in 1889.

She has never been subject to epilepsy, convulsions or fits of any kind; is not active, walks slowly, and is not nervous. Her appetite is generally good but she is particular about what she eats, and eats very slowly. The sight and hearing are very good; she is fond of music; recognizes color and pictures. She understands a command and can do a very simple errand. Her speech is in monosyllables and is confined to "Yes," "No," "Mamma," and a few other sounds expressing her wants, which are understood only by her care-takers. Her voice is deep and coarse. In disposition she is mild, obedient and affectionate, but when crossed can become quite passionate; laughs easily and heartily. She seems to comprehend what is said to her and what transpires about her. Her personal habits are cleanly; cannot dress and undress herself; nor do any kind of work; can use spoon, knife and fork.

She sleeps well and quietly; has had the usual diseases of childhood. The father and mother were respectively 30 and 29 years of age when this child was born, and she was the third of eight children, all bright with this exception.

During the history of the Institution this is the first and only case of its kind which has been admitted. In May, '93, Dr. Wm. Osler, of Johns Hopkins University, read a paper on "Sporadic Cretinism in America" before the Association of American Physicians. In preparation he sent out letters to Asylum Superintendents in the United States and Canada, asking information as to the existence of the disease. Institutions for feeble-minded were included as well as physicians in those localities where goitre was said to exist. From their replies he found eleven cases existing throughout the country, three under his own observation at Johns Hopkins, one at the New York Custodial Asylum for Feeble-Minded Women at Newark, one at the Indiana School for Feeble-Minded, two at the State Insane Asylum at Stockton, Cal., one at Randall's Island Hospital, one at the California Home for Feeble-Minded Children, and our own case. One also was reported by Drs. Rotch and Bullard.

When admitted our patient's height was 39 inches (99 cm.) and weight, 49½ lbs. (22.44 kilog.); head circumference, 21½ inches (54.7 cm.); measurement from occiput to root of nose, 12.8 inches (32.5 cm.); across head from external auditory meatus to external auditory meatus, 13.5 inches (34.4 cm.); circumference of neck, 13.5 inches (34.4 cm.); circumference of thorax, 26.5 inches (67.5 cm.); and of abdomen, 28 inches (71.2 cm.) Her appearance was typical of sporadic cretinism or cretinoid idiocy; dwarfed in stature, the figure broad and squat; limbs, short and thick; bones of legs, rachitic and enlarged at the epiphyses; hands and feet, stumpy; skin of an earthy, waxy color, flabby, wrinkled, scaly and furrowed as if too large for the body; hair, thin and wiry, with pityriasis of the scalp. (De Bourneville describes this as an eczematous eruption.) The head was large, flattened at the top, with the plane ascending from before backward; anterior fontanelle closed. The nose was broad, with flattened bridge, which apparently increased the distance between the eyes. The lips were

thick and bluish; tongue, large and somewhat protruding; teeth, remnants of the first dentition; cranium, brachycephalic. The subcutaneous tissues appeared infiltrated and myxoedematous; there were puffy swellings in the supra-clavicular spaces. Thyroid gland was absent.

This child sheds tears, which is an exception to the rule, and also perspires. The menses appeared in February, 1892, and have been regular up to the present time.

Treatment was begun September 4, '95. At that time her height was 40½ inches (103 cm.) and the weight 57 lbs. (25.85 kilogs.) Head measurements, same as above. The denture was as follows—Upper jaw: Central permanent incisors just showing through the gum; no lateral incisors; canines, temporary; four permanent bicuspid; first molars permanent. Lower jaw: Central and lateral incisors and canines, temporary; bicuspid and first molars, permanent. Thyroid extract, P. D. & Co., (dose 5—15 gr. t-i-d) was given, 15 gr. daily for six days. At the end of six days thyroid extract was stopped because of the irritation set up; there was loss of appetite and weight with slight diarrhoea. On one day only was the temperature above normal, rising to 99 degrees. After two days rest in bed, treatment was renewed, six grains daily being given. Fifteen days later, Sept. 27th, the dose was increased to 10 grs. Digitalis and Strychnia were given for the heart. During the month the pulse ranged from 105 to 135.

After one month the change in her appearance was striking. There was a brightening of the expression, the movements of the head and hands became quicker and the texture of the skin changed in places. By the last of October the entire skin was renewed, giving place to the velvety skin of an infant. The scales of the head with the hair were also gone, and a new growth of hair just appearing. In November she was ill with a bronchitis; the thyroid extract was stopped, and when it was renewed, a week later, the dose was fixed at six grains daily, which is the dose she has continued to take. At that time her weight had fallen to 43 lbs. (19.5 kilogs.) For about a week every month the thyroid was stopped on account of the irritable stomach which resulted, and liquid beef peptonoids and milk were administered to tide her over.

Feb. 1st, '96, weight 60 lbs. (27.21 kilogs), height 42 $\frac{1}{2}$ inches (108.8 cm.)

May 1st, '96, weight 62 $\frac{1}{2}$ lbs. (28.34 kilogs.); height, 43 $\frac{3}{8}$ inches (110.8 cm.); a growth of three and one-eighth inches since treatment was begun eight months ago.

April 13th she was sent to the hospital with a high temperature and an irritable stomach (these symptoms disappeared in two days) and remained there until May 15th, during which time she took no medicine.

The change in dentition is marked. The central incisors are full grown. The upper laterals half through; the lower lateral on the right corresponds to the upper; the left just shows through the gum. The canines are temporary except the lower right, which is permanent. The permanent bicuspid is present; the lower first molar is present on the left side but the lower right one was extracted six months ago. The upper first molars are in place; the left second molar is through and the right second is just appearing. Thus the teeth which have appeared since the beginning of treatment are, the eight incisors, one canine and two second molars.

The measurements, June 1st, 1896, are as follows:

From occiput to bridge of nose, 12.5 inches (31.7 cm.).

From external meatus to external meatus, 13.7 inches (34.9 cm.)

She is so changed that she is not recognized by persons familiar only with her appearance before treatment. The hair is thick and rather dry, but not coarse as before; of a light grayish brown color. The face is full of expression, the blue eyes are deepened in color. The puffiness of the eye lids has about disappeared. The skin is soft and of a clear complexion. She walks about alone and more quickly. Can say short sentences and phrases, as: "I tell Miss W—— on you." "Doctor W—— going home?" She is nervous, and when addressed, petted or teased, scratches her head and neck in a nervous fashion. Waits on herself and does much more in dressing herself than before. She is extremely good natured, as she laughs with anyone who notices her.

The recent photograph does not show the bow of the legs as in walking, which is very pronounced, although slighter than in the former photograph.

VOCAL MUSIC IN THE EDUCATION OF THE FEEBLE-MINDED.

MISS ELLA FRAZEE, FARIBAULT, MINN.

On account of the inability of children of defective intellect to give attention, they are deprived of the benefit of many mental drills which are helpful to others. Of all the agencies employed for their elevation and training, none has played a more important part than music. Their natural love for it and their great tendency to imitate makes it possible for them to acquire sufficient knowledge of music to constitute a very considerable mental training. These children can not *study* music profitably, as other people study it; hence, very much of the instruction in the theory of music, which, for normal children, usually precedes the practical application, must of necessity be omitted.

A person of ordinary intelligence and sufficient maturity may easily be induced to undergo very severe discipline and training, and to spend, at hard work, all the time his teacher may desire, relying upon the latter's promise that he will some day be a finished musician, and his assurance that there is no other road to success. To attempt such things with children even normal ones and under the stimulus and encouragement of parental influences is to invite defeat.

The child has the voice and the musical instinct; upon these must the entire structure of his musical education be built—the results of the work done in the past prove without a doubt that this theory is correct.

The mission of musical sound is to call up the purest harmonies of the soul, and any system of teaching which makes the pursuit of music a burden, and the student a martyr, is not worthy the name of a system of education.

The theory of our teaching requires that every power of the body shall be trained and developed by a systematic, healthful process, and that all else must yield to the development and strengthening of the natural powers of the child. Singing, as a physical exercise, and as an accompaniment of various games and amusements performs a valuable function.

Singing furnishes, in the association of words and music, both an excellent mental drill and an opportunity for better thoughts and motives, as well as a recreation from less attractive exercises.

The value of singing, in this respect, being granted, it follows that children should be induced to sing as early as possible, and that they should be so taught that they will love music for the beauty there is in it, and will not regard the singing lesson as a disagreeable task. A child can not be *forced* to sing. The work must be made attractive from the beginning. The teacher who does not have skill and judgment in selecting songs with pleasing words, and catchy airs, will meet with little success in teaching these children.

A revolution in the teaching of vocal music in the public schools has swept over our country during the past few years. The graded courses in music, issued by the various publishing houses, and following more or less closely the methods of the Tonic Sol Fa system, have brought music down to the capacity of the child, and have done much toward making music popular and universal.

These courses, however, are courses of study, and presuppose a school of intelligent children of nearly equal ability and advancement. These conditions are lacking in a school of feeble-minded children; hence such courses, while they may be successfully employed to a limited extent, must be supplemented by a great amount of work by the teacher, based on nothing but the fundamental facts that the child has a voice, and an ear for music.

It is this which distinguishes the teaching of the institution from that of the music school; and the efforts of the teacher who expects to succeed must be turned in this direction. The ability of the teacher to prepare or select exercises suitable for this work is a measure of her efficiency.

The songs selected should not be so long as to be difficult to learn, or wearisome to sing. The plan, at every step, should be to find a song as nearly as possible exactly adapted to the capacity of the children. It should have in it, both in the music and in the sentiment of the words, as much that is attractive as possible, and the aim should be to induce all the children to sing. If a child

sings out of tune, the teacher should not urge him to "open his mouth and make a noise, no matter how it sounds," but should in every way discourage loud and discordant tones. Incorrect tones result from loud singing, straining the voice and defective hearing, and a child who can not sing in correct tone should receive special attention with a view of correcting this difficulty. He should be taught to distinguish tones of differing pitch, and to recognize the beauty there is in a perfect tone, and the blending of harmonious tones. If the children are led along carefully, the number of cases of this kind can be very nearly eliminated.

The Tonic Sol Fa method of teaching, which, though possibly defective in many ways, and not endorsed by many of the best music teachers of the country, is becoming popular where it has been properly used. It is based on tone relationship, which must be the foundation of all successful teaching of vocal music. Starting with the tones *do* and *sol*, which are represented by *d* and *s*, on the board before the class, the teacher gives the tone clear and round, calling attention to the position of the lips, giving examples of different expressions resulting from a change in the position of the lips. While the power of imitation in these children is usually marked, a mirror may be used with good results for cases in which it is deficient. This work must necessarily be very largely individual to encourage self-reliance. The number who can reproduce the tone and have courage to attempt it will at first be small, but will gradually increase from day to day, until the amount of enthusiasm aroused by this apparently simple exercise will be surprising.

After a sufficient time has been spent on the exercise, another tone may be added as, *mi*, represented by *m*. The exercise given above may now be repeated, using the three tones *do*, *mi*, *sol*. A great variety of combinations and arrangements can be made, giving effects in both melody and harmony that will be attractive as well as useful to the children. The ingenuity and originalty of the teacher will here find an almost unlimited field.

This work should be continued until all the fundamental tones are learned. At the first indication of weariness the exercise should be varied by some lively air familiar to the class. The judgment

of the teacher must be exercised, in order that this may be made an attractive exercise, and not an irksome duty. From the class can now be selected eight of the best singers to form a "choir," a complimentary term which I have used in my classes. These receive special instruction, outside of the regular hour for the singing class. Easy selections are arranged for the four parts. When the key note is given, the soprano, alto, tenor and base will each sound their respective tones. They will sing the selection independently, without accompaniment, to the surprise of those who are otherwise familiar with the characteristics of these children.

This plan of teaching songs differs from the old one as greatly in results as in methods. With little regard for quality of tone, often the only object in view has been to produce a great volume of sound, and the only result was a great volume of discord.

The aim should be to have all the children sing, to lead them gradually to sing a better grade of music, and to cultivate in them a love for music, not only on account of the life and noise there is in it, but rather for that quality which appeals to the aesthetic senses. They should be led to love music for its intrinsic beauty and not because it gives them an opportunity to make an exhibition of themselves. While marching, dancing and various calisthenic exercises cultivate and develop the physique, music appeals to and cultivates the higher and nobler powers of the child, and should be made as nearly universal in all our institutions as possible.

Knowledge of gross and minute anatomic characters must lead to more perfect investigation of structural lesion. So nearly perfect may become our knowledge that the smallest alterations will not escape the eye of the microscope, and the true relation of such changes, singly or aggregated, to change of function.

As a reward, discovery of the real cause and nature of ailments such as epilepsy, chorea, catalepsy, hystero-epilepsy, and that chameleon-like malady, neurasthenia, will sufficiently repay the outlay of money, time and brains. Without being optimistic it may be said that the future promises a better knowledge of all diseases whose pathology is now obscure, and it must be accomplished mainly through the agency of the microscope.

Every graduate of to-day should possess a good microscope and the knowledge how to use it, because it is the eye with which he will be able to see the hidden mysteries of disease that have baffled his less fortunate ancestors in the profession for centuries. Only by its aid can he expect to solve the riddles of an unseen world, and trace out and rightly read the signs of disease written in the ultimate structure of brain, nerve, muscle, organ and cell.

—*From Medical Summary.*

SELECTED.

CUSTODIAL CARE OF THE ADULT FEEBLE-MINDED.*

E. P. BICKNELL,

Secretary Indiana State Board of Charities.

Much is said about the number of criminals and the number of insane persons in Indiana. Our two big prisons are crowded with convicts. Four large insane hospitals will not hold our insane. We have but one institution for the feeble-minded; yet, to-day, there are as many feeble-minded persons in Indiana as of criminals and insane added together. According to the last United States census there were, five years ago, 5,568 feeble-minded persons in Indiana. Our single asylum for this class of unfortunates, a school we call it, has a capacity for about 500 inmates. Some 5,000 then are in county poor asylums, orphan asylums, are being cared for by private effort or are wandering about as vagrants and beggars.

It was not until 1879 that Indiana became aware that she owed anything to her feeble-minded citizens. Since then she has done well. Her liberality has established here this magnificent institution with its great farm. The 500 inmates are well cared for. They are clothed and fed and given such training of hand and mind as they are capable of receiving. But what about the other 5,000? Does the State owe nothing to them? Is there any further duty to the public in this direction? These are questions which I should like you to consider briefly.

For convenience let us separate the broad subject into three divisions:

1. Labor and cost of support of the feeble-minded.
2. Happiness of the feeble-minded.
3. Protection for the feeble-minded themselves and for society.

As matters stand to-day, the feeble-minded citizen does not amount to much as a laborer. He is more likely to be a dead

*Reprinted from the "Charities Review."

weight upon his family or the community in which he lives. In many instances a single feeble-minded person proves to be such a burden that his whole family is kept in poverty and wretchedness in its effort to properly care for and support him. It is like putting on brakes while the wagon goes up hill. In a poor asylum the feeble-minded inmate is of some use. The superintendent has so many duties that he cannot take time to give the feeble-minded inmate special attention. Everyone who has had experience with these inmates knows that they are unreliable and of little use except under close supervision. To-day there are about 1,000 feeble-minded persons in county poor asylums in Indiana. There they remain, year in and year out, a load upon the taxpayers. With proper training and supervision they could earn a considerable part of the cost of their support, but in our poor asylums they cannot have the training or the supervision. Their earnings are therefore exceedingly small.

Dr. F. H. Wines, of Illinois, at the international Congress of Charities at Chicago during the World's Fair, spoke about the labor of the feeble-minded. Said he: "Some idiots can be made self-supporting, just as an animal can be. I can take a horse and make it earn money, but it cannot earn money for itself. I can make an idiot earn money for me but he cannot earn it for himself. I can protect that idiot, as I can a child, but the idiot cannot protect himself. * * * So, when a family is in circumstances to take care of its own idiots, well and good; it is far better that they remain where they have the benefit of natural parental affection. But the great mass of families with idiotic children cannot do it. * * * For this reason idiots have to be collected together, under the charge of trained attendants, and held for life."

The average cost of supporting a poor asylum inmate a year in Indiana is about \$71 above what he earns. The average cost of supporting each feeble-minded person kept in his own home we have no means of knowing, but it is probably as great as in the poor asylum. Wherever the feeble-minded person is found outside the School for Feeble-minded, his work is unsystematic and of little account, his care is expensive and burdensome, and such capabilities as might be developed by proper training and treatment

are never brought into use. Suppose now we have a large number of these persons brought together into one place, where buildings have been constructed especially with a view to the needs of feeble-minded persons, and under the supervision of a sufficient number of officers who are skilled in the work and whose whole time is given up to it. We then have an opportunity to train the weak minds and clumsy hands as fully as they are capable of being trained. The inmates work always under the direction of skilled officers. Each inmate is employed at what he can do to the best advantage. As there are a great many feeble-minded persons together, it is found that they can be divided into groups according to their dispositions and ability. Some are found who show a natural aptitude for caring for cows; others do better in gardening; some are better fitted for housework; a certain per cent. like tools and can be taught to use them with sufficient skill to manufacture mattresses, brooms, shoes, clothing, and do various kinds of construction and repair work. Each group works under its particular officer and in this way works to the best advantage. The result is that the average amount of profitable labor done by each inmate in the large institution is much greater than when he was at home or in a poor asylum. At the same time he is better fed and better clothed than when at home or in a poor asylum, because he is in the hands of specialists who look after his welfare in every particular. Experience has shown that steady employment is the best remedy for the restlessness, viciousness and discontent of feeble-minded persons. The result of constant and suitable employment in the large institution is, therefore, that the inmates are more quiet and tractable than they were in the poor asylums or in their own homes.

A large institution such as I have here described could only be established and maintained by the state. But the question of cost comes in. How much greater would the expense be, of supporting the feeble-minded in a big state institution than it is in the poor asylum? We cannot answer this in exact figures, but we have a means of estimating it which is reasonably accurate. This means we find in the cost of keeping the boys in the State Reform School. Last year in the Indiana Reform school for Boys, the

cost of keeping each inmate was \$123.21. This included food, clothing, salaries of officers and employes, and the cost of repairs and minor improvements made on the buildings and farm. We may admit at once that the cost of maintaining the adult feeble-minded would be as low as the cost of keeping the boys in reform school. But a careful comparison will show good reason for believing that the net cost of keeping a feeble-minded person in a large institution would be much less than the cost of a boy in reform school. By the use of the term "net cost," is meant the cost in excess of what the institution earns. For instance, if it cost \$100,000 to maintain an institution a year, and during the year the institution earned \$25,000 on its farm or in its shops, the "net cost" of maintaining the institution a year would be \$75,000. In the Indiana Reform School for Boys, the boys are in the school-room half of every week day. Some are in school all day. Of those who are in school half the day, a large proportion are employed at learning trades during the other half. Most of this employment does not produce any earnings for the institution, but, on the contrary, the purchase of tools and materials for the work adds to the expense of maintenance. This is all essential and vital to the conduct of a high-class reform school, but many things necessary in the reform and training of bright boys would be useless in an asylum for feeble-minded adults. A portion of the money spent for teachers in the reform school would be saved in the asylum for feeble-minded. The feeble-minded inmates during week days would be steadily employed at labor which would earn money for the state. In the Reform School probably less than one-third of the actual earning power of the boys is employed in earning money for the state. It seems a reasonable conclusion, then, that an inmate of the asylum for feeble-minded would earn more and cost less than an inmate of the reform school. This being a fact, is it not safe also to conclude that, as the net cost of maintaining a boy in reform school is \$123 a year, the net cost of maintaining an adult feeble-minded person in a state asylum need not much, if any, exceed the cost of keeping him in a county poor asylum where the average is \$71 a year? Dr. G. A. Doren, who for many years has been superintendent of the Ohio School for

Feeble-Minded Children, has asserted that with a farm of 1,000 acres he could care for all the feeble-minded of the custodial class in that state and make them actually self-supporting. While this is probably an extreme view, we are probably conservative in estimating that the cost of maintaining the feeble-minded in a state institution would not exceed the cost of keeping them in the county poor asylum.

Having thus hastily considered the subject of employment for the feeble-minded, and the cost of their support in a large institution as compared with the cost in many small ones, let us pass to the question of the inmate's own preferences and happiness. Who has not seen and pitied the one feeble-minded child in a family? Without companions, unappreciated, neglected, separated from all about him by an impassable gulf, he wanders about doing such simple chores as he is capable of, the family affection for him too often eaten away by the incessant gnawings of humiliation and care. In the county asylum even the comforts of paternal or family care are absent. The feeble-minded man or woman is simply one member of the herd. His chief animal wants are satisfied. The superintendent has neither time nor facilities for cultivating the weak mind or training unsteady and awkward limbs.

Place the feeble-minded person in a large institution especially prepared for him and all this is changed. The whole life and spirit of the institution are on a plane that he can understand and appreciate. Everything is simplified and managed for his benefit. Life is brought down to his level and he begins to enjoy it. He is surrounded by companions of his own kind and is no longer isolated and lonely. Instead of being the last person thought of and the common drudge, he finds himself "as good as anybody" and the object of solicitation and care. He is constantly inspired to do his best and the effort sharpens his wits and trains his muscles. Special amusements and entertainments are provided for him. In the poor asylum or private family he does not fit his surroundings. He is a round bolt in a square hole. In the large special institution the surroundings are made to fit him snugly and pleasantly. Being happier and more contented thus, he is more easily controlled and can and will do more and better work.

We come now to the most important consideration of all in our relations to the feeble-minded. These have to do with the protection of this unfortunate class of society and the protection of society from the unfortunates. Feeble-mindedness not only tends to perpetuate itself through heredity, but it fills the ranks of vice, contributes heavily to crime and swells mightily the hosts of pauperism. Our best efforts will be necessary if we are to check this rising tide of evil.

The curse of feeble-mindedness descends from parent to child as no other defect does. Feeble-minded parents rarely bear children of sound mind. When one parent is mentally sound the offspring may be fairly bright, but if both parents be of feeble intellect, there is little hope for aught but feeble-mindedness in the unhappy children. The great, threatening danger from the increase of feeble-mindedness lies in the frequency, almost certainty, with which it is passed from parent to children. We need not go far for illustrations. Every poor asylum superintendent and every other person who has given attention to the subject, can cite them. I could fill many pages of this paper with illustrations of the inheritance of feeble-mindedness which have come to my attention in Indiana. In the office of the Board of State Charities to-day are records of hundreds of families from which examples could be given. I have selected sixty-one families, which are wholly or in part inmates of county poor asylums, as affording some of the most noteworthy examples. These records are not complete. Many members of the sixty-one families selected are not enumerated because their mental condition is not known positively. Although it is certain that a great many of the omitted members are feeble-minded, none are counted except where the feeble-minded is known through the observation of some responsible person. These families are to be found in thirty-one counties, thus representing only one-third of the 92 counties of the state. In these 61 families are known to have been 267 different feeble-minded persons, an average of $4\frac{1}{3}$ to each family. These 267 feeble-minded persons consist of 101 women, 51 men and 149 children.* That is

*NOTE.—In cases where feeble-minded children have become mothers they are counted twice in this classification. This accounts for an apparent discrepancy between the total and classifications.

an average of three feeble-minded children for every two feeble-minded women. Here we see how the curse increases. Take the fact that there are over 5,000 feeble-minded persons in Indiana to-day, of whom about one-half are women, and think of that in its relation to the other fact that 101 feeble-minded women, of whom we have partial records, are the mothers of at least 149 feeble-minded children, and the real significance and danger of the situation begin to be apparent.

But even yet the terrible tale is only half-told. It is impossible to think of the evil of feeble-mindedness without heeding the curse of vice and illegitimacy which are its inevitable accompaniments. In the feeble-minded person the animal passions are usually present and are often abnormally developed, while will and reason, which should control and repress them, are absent. The feeble-minded woman, thus lacking the protection which should be her birth-right, falls easily into vice. She cannot, in her weakness, resist the persuasions and temptations which beset her. When the baser passions are strong, she must oppose not only the influences from without, but her own dominating desires. She is not to be condemned and punished, but rather to be pitied and helped in every possible manner. On the other hand, society also is entitled to protection. Many have been the instances in which the presence of a feeble-minded woman or girl in a village or country neighborhood has been a veritable curse to the community. Unable to control her debasing propensities, she has become a source of temptation and corruption to young men and boys, who otherwise would not have been led into vicious habits. Irresponsible and innocent of intentional wrong, she yet brings to our very doors the most destructive and insidious of evils.

The immorality and demoralization which thus often accompany the feeble-minded woman through life, leave in their train a harvest of illegitimacy and pauperism beyond the power of words to adequately portray. The three children of feeble-mindedness—Idiocy, Pauperism and Illegitimacy—are monstrosities from which we must protect ourselves. They are a triple burden upon the prosperity of the people and a threat against the best in morals and education. With these helpless women mingling more or less

freely in society, no remedy for the present conditions, growing worse every year as they are, seems possible. It were easy to give illustrations of the evils of which I am speaking, until the readers would turn away sick and weary at the sad recital. A few cases of individuals and groups, however, may serve to indicate how widespread the evils are to-day, and the rapidity with which their magnitude increases.

In one of our southern Indiana counties is a family, of which from one to six members have been in the poor asylums at all times for thirty and probably forty years. Many of the members have died, but their descendants have always been ready to take their places in the ranks of pauperism and vice. It is impossible to secure a complete record of this family, but from the fragmentary history which is available and which includes probably not more than half the whole number of members, the following facts are taken: One of the oldest of the family now living was born in 1823. He is feeble-minded. His first wife was feeble-minded. Four children were the result of this marriage, two sons and two daughters. All were feeble-minded. These children were named Mary, Margaret, Andrew and George Washington. The first wife died and in his old age this man married a second time, his second choice being also a feeble-minded woman. The two daughters who were born to the first wife of this man were, as I have said, feeble-minded. Both are living to-day and are inmates of the poor asylum. Neither has ever married. Mary has borne six or seven children. Two or three have been dead for years and their mental condition is not positively known. Two daughters now living are in the school for feeble-minded, and a son, who died within a few years, was feeble-minded. A third daughter is feeble-minded and is the wife of a feeble-minded man. They are not in the poor asylum, but live in a neighboring county, where they are given assistance by a township trustee. This couple has one child, of whose mental condition I have no information. The other sister, Margaret, has a daughter, feeble minded and unmarried, who works in another county, and a feeble-minded son now in the school for feeble-minded. This woman has also borne two or three other children now dead, but all said to have been feeble-minded.

Of the son, Andrew, we have no record. He is dead and probably died in youth. The son, George Washington, married a feeble-minded woman and a feeble-minded son was born to them. George Washington afterwards separated from his wife and later married a second feeble-minded woman. Before marriage this woman had borne an illegitimate child by George Washington. This child was also feeble-minded. It should be remembered that nearly all the persons referred to in this family record have been during the whole or a part of their lives a burden upon the community. Every member of the family, so far as known, has been feeble-minded. Probably one-half the members of the family have been illegitimate. Those who have entered into the marriage relation have had little or no respect for it, and there is much doubt as to the legitimacy of the children born to married mothers. The history of this family is not closed. As it stands to-day, there are probably thirteen members supported wholly or chiefly through public funds. Hardly a year passes that other feeble-minded, illegitimate children are not born into the family. The burden upon the tax-payers grows greater and the curse of feeble-mindedness and illegitimacy spreads.

From one of the best of our eastern counties the following example is taken. This record begins with a feeble-minded man, dead many years ago. Of his wife we have no record. Two daughters were born to the couple, Mary and Susan. Both were feeble-minded. Further than this we know nothing of Susan. Mary married and became the mother of two daughters, Sarah and Florence, both feeble-minded. When girls both Sarah and Florence were in the poor asylum and both were afflicted with a disease which resulted from leading an immoral life. Florence married and is not now in the poor asylum. She has children said to be feeble-minded, but we have no authentic information as to the number of children or their mental condition. Sarah bore one illegitimate child. This child, Ira, is feeble-minded and is suffering from a loathsome disease. She has borne one illegitimate child which is now dead. It was feeble-minded. This is an unbroken record of five generations of feeble-mindedness.

Here is a case taken mainly from the records of a poor asylum

in another Indiana county: A certain man and his wife were reasonably bright, but were first cousins. To them twelve children were born. Of these twelve children one, or possibly two, are bright. Two daughters, Martha and Florence, are in one of the state insane hospitals. One daughter, Mary, has two illegitimate children and is soon to bear another. The two children already born are feeble-minded. This woman is still young and likely to bring several more children of the same kind into the world during the next ten years.

In another county poor asylum is a feeble-minded woman who herself is the illegitimate child of a feeble-minded mother. This woman, now in the asylum, has four feeble-minded children, all illegitimate. Of these four children, three are white and one black. One of the children, a fifteen year-old girl, is away from the poor asylum going about the country as she pleases, and although but a child, has already started upon a life of immorality. There is little doubt that unless she is properly protected, she will in years to come assist in increasing the host of feeble-mindedness and illegitimacy in the state.

In an asylum of a south-eastern county, years ago, was a man with his sister and wife, all feeble-minded. The man's sister married and became the mother of several children, all feeble-minded. Of these, two daughters grew to womanhood. These two daughters were Rachel and one whose given name is unknown. Rachel married and bore two children, who died in infancy. She and her husband then separated and she married a negro. Both were inmates of the poor asylum and they ran away to marry. Several children were born of this second union, all but one dying in infancy. Joe, the surviving child, is feeble-minded. He has served a term in state's prison for stealing. Rachel's sister, whose given name is unknown, bore two feeble-minded daughters, both of whom are now living and both married. One of these daughters is Lou, the other Nancy. Lou has four little children, and she and her family are supported by the public, though they are not in the asylum. The mental condition of her children we do not know. Nancy is also married. She is the second wife of a feeble-minded man who is a cripple from paralysis. The result of this marriage

is four daughters, all feeble-minded. The oldest daughter, only sixteen years of age, is a bad character and has served one or more jail sentences for vicious conduct. Of this family, from first to last, it is said, there has never been a female member of sound mind and that of the male members, all, with possibly two or three exceptions, have been feeble-minded. As this family to-day contains four young daughters, all feeble-minded and in the worst of associations, it does not require any stretch of the imagination to believe that unless vigorous measures of protection are taken, the record of the future will even exceed that of the past in the production of feeble-mindedness and the spread of immorality.

Enough examples have been cited, I believe, to give some idea of the conditions which prevail to a greater or less degree in every county in Indiana. It should not be forgotten that a very great proportion of the illegitimacy which exists among the feeble-minded has come to pass in spite of the best efforts of homes and county poor asylums to prevent it. Anyone who has given even the briefest attention to the subject knows how totally inadequate is the protection for the feeble-minded which can be given by these institutions. Dr. Walter Fernald, the superintendent of the Massachusetts School for Feeble-minded Children, in speaking of the feeble-minded has said :

“The tendency to lead dissolute lives is especially noticeable in the females. A feeble-minded girl is exposed as no other girl in the world is exposed. She has not sense enough to protect herself from the perils to which women are subjected. Often bright and attractive, if at large they either marry and bring forth in geometrical ratio a new generation of defectives and dependents, or become irresponsible sources of corruption and debauchery in the communities where they live. There is hardly a poor-house in this land where there are not two or more feeble-minded women with from one to four illegitimate children each. There is every reason in morality, humanity and public policy, that these feeble-minded women should be under permanent and watchful guardianship, especially during the child-bearing age.”

In the office of the Board of State Charities we have partial records which show that in 42 county poor asylums are, or within

recent years have been, 75 feeble-minded women, who have given birth to 137 illegitimate children. These figures, taken in conjunction with those given in preceding pages of this paper, showing that in 31 county poor asylums are 61 families known to contain 267 different feeble-minded persons, may convey some idea of the extent of this great triple evil of feeble-mindedness, pauperism and illegitimacy. In collecting these records we have felt that we are simply dealing with the surface indications. We have made no systematic effort to gather complete statistics, as this would be impossible while poor asylum records are kept as they now are. The great underlying facts of the wretchedness and poverty and immorality and ignorance and cost we can only estimate or conjecture, but enough of the truth is tangible for us to know that the problem which we have to solve, if possible, is one of tremendous magnitude and importance.

In the famous study made by Dugdale of the Jukes family in New York it was shown, that from a single feeble-minded woman descended many generations of paupers and criminals, while the worst of vices characterized a large majority of her descendants. Records were made of 709 persons who were descendants of this woman. Fifty-two per cent. of all the women in this number were prostitutes. In the 709 persons were 76 criminals. The history of this family, in its various ramifications, was obtained for a period of seventy-five years, and Mr. Dugdale estimates that the cost to the community of caring for the paupers and prosecuting the criminals of this family during that period was over one and one-quarter millions of dollars. The percentage of feeble-mindedness which descended from parent to child through all this wretched history was very great. Speaking of the evils resulting from feeble-mindedness, Prof. Charles R. Henderson, of the Chicago University, has said: "It is intolerable to permit such creatures to become parents and so multiply and perpetuate pauperism, idiocy and crime." This sentiment has been expressed in various forms by every person who has given the subject attention. Since all feeble-mindedness does not come from feeble-minded parents, but may be caused by sickness or accidents in infancy, or by pre-natal influences of which we know but little, there is little hope that any method of

prevention can ever eliminate feeble-mindedness entirely from among the people. It does seem clear, however, that if those who are feeble-minded could be effectually prevented from bringing children of their own kind into existence, we would have cut off the greatest and most menacing source of supply.

Even though the protection of the feeble-minded on the one hand and of society on the other should draw heavily upon the public treasury, it would none the less be in the interests of real economy. It is impossible to calculate what even one feeble-minded woman may cost the public, when her vast possibilities for evil as a producer of paupers and criminals, through an endless line of descendants, is considered. If the state can seclude such a woman, and thus at one stroke cut off the possibility of a never-ending and ever-widening record of evil and expense, shall it do it? Can it afford not to do it? The people cannot choose whether or not they will support the feeble-minded. That problem solves itself, always in the same way. The feeble-minded must be supported by the public. It may be through the charity of neighbors and friends. It may be through the township overseer of the poor, or the county poor asylum, or the hospital, or the jail, or state's prison, but the public always pays the bills. And steadily, during all these efforts to assist the helpless feeble-minded, that unfortunate class continues to rapidly reproduce its kind and swell the hosts of paupers and criminals. The state itself is the only agency by which the feeble-minded may be humanely and mercifully, but firmly, taken in hand and placed where they can be utterly prevented from producing the evils touched upon in this paper. Does not every sentiment of humanity and pity and business demand that the state shall take this step? It would mean the expenditure of some money, it is true. It would mean the expenditure of a large amount of money. But it would immediately save at the same time an expenditure almost or quite as great by the counties and communities, and it would save in time to come so great a sum of money that the expenditure now needed to provide for these people would seem, beside it, comparatively small. I believe that the calm judgment of the people of Indiana, could they once fully and clearly understand the magnitude and gravity of this problem, would be overwhelmingly in favor of promptly taking such measures as promise to most effectively check the evils which have here been portrayed. When the dictates of humanity and public economy are in entire harmony it would seem that decisive action ought not to be long delayed.

JOURNAL OF PSYCHO-ASTHENICS.

Entered at the Postoffice at Faribault, Rice Co., Minn., as second-class matter.

VOL. I.

DECEMBER, 1890.

NO. 2.

THE RELATION OF PUBLIC INSTITUTIONS TO SCIENTIFIC INVESTIGATION.

The routine duties of superintendents and medical officers of public institutions are too numerous and exacting to allow that attention to original investigation that the material at hand would otherwise permit, and that the majority, doubtless, would gladly promote. A few who have special talent and preliminary training will accumulate material along the lines of their preferences, and thus from year to year a little will be added to our stock of special scientific knowledge. This growth, however, is exceedingly small, and must necessarily be so under the traditional organizations of our institutions. The most that the average superintendent can do is to suggest lines of research and so plan the work of the medical assistants that they can devote some time to one or more of them. Success in any of them, however, depends upon much more than the assignment of three or four hours per day to the laboratory, with ample material and appliances at hand. There must be *first* of all talent and love for scientific study; *second*, ample time, not only for laboratory work, but for reading sufficient to keep thoroughly informed as to the work of others along the same and similar lines.

The endowment of some institution or properly organized trust with funds sufficient to employ a few competent specialists for the study of our material would be a consummation devoutly to be wished. Where is the millionaire ready to place the endowment?

Probably the most hopeful plan at present available is to enlist the interest of specialists entirely outside of institutions, and secure their services in such lines as appeal to them, and, for the love of science alone. Such institutions as are situated near large cities or strong medical institutions are to be especially envied for their opportunities in this direction. The little that has been accomplished in this way suggests greater possibilities for the future.

WHAT'S IN A NAME?

As the claims and requirements of all classes receiving treatment or training at public expense are more generally recognized and carefully studied, there comes a dissatisfaction with the earlier naming of the institutions devoted to them. The original idea concerning all these institutions was that of an asylum—"without exposure to violation," a refuge. It was Lunatic Asylum, asylum for Idiots, asylum for Deaf and Dumb, etc. The movement for revision of names is a healthy one and indicates a better understanding of the newer and better purposes of the institutions. The sentiment involved in the term asylum was a beautiful one in so far as it applied to an unimprovable population, but those who have been shaping such matters have rightly insisted that even the name must be in harmony with the highest purposes of the institution. If it is devoted to the care of the insane it should be called a hospital rather than an asylum, even though in regard to a large percentage of the population the latter term would not be inappropriate. In a list of one hundred and fifty-five names of institutions for insane in this country, less than half, seventy-one, still retain the name asylum. Fifty are termed hospitals and thirty-four have a variety of names, generally not indicative of their purpose.

When the purposes of an institution are educational and its work is with children and youth, it is recognized as particularly unfair and unjust to attach for life to its beneficiaries any stigma from its name implying mental or moral inferiority. Even reform schools are rapidly adopting new names and out of eighty-three in this country only twenty-eight retain the word "reform" in their name. Nine are termed refuges, (equivalent to asylum), nineteen have a variety of names not always distinctly indicating their nature and depending more or less upon local factors. Twenty-seven are termed industrial schools, or some equivalent name, plainly indicating their supreme purpose of developing into honest, intelligent and industrious manhood and womanhood, the boys and girls committed to their care.

Schools for the education of the blind and deaf are no longer hampered by the term asylum as applied to them except in two

cases, those of New Mexico and Texas; the former being devoted to deaf and blind and the latter to deaf only. This is out of fifty-two boarding and seventeen day schools for the deaf in this country and thirty-seven schools for the blind. (In some cases both classes are educated in the same institutions, and to this extent the figures given are duplications).

In two states, Minnesota and Washington, the deaf, blind and feeble-minded, while educated separately, are in a way classed together by the application of the term "Institute for Defectives" to the legal organization, of which each school forms a department. The use of the term defectives to these classes was adopted by commissioner T. H. Wines in the classification of the tenth census, where the words, Defectives, Dependents and Delinquents formed convenient generic terms for the classes indicated. In Minnesota a strong feeling has been aroused among the deaf people of the state and their friends against their being called defectives. In matters of this kind affecting the public it is useless to make fine distinctions in the use of terms and insist upon public recognition of these distinctions, even when they may be scientifically or technically correct. On the other hand, sentiment should not be permitted to incorrectly educate the public and teach or preserve a falsehood.

"Defect of speech," "defect of hearing" and "defect of sight" are expressions of such common use, that it was quite natural to speak of those possessing such defects—when they were so pronounced as to necessitate special systems of education and training, as defectives. The objection, however, undoubtedly arises rather from the theoretical association of the deaf and blind with the feeble-minded than from any deep seated objection to the generic term used for all. The association is of course only theoretical, as the respective organizations below the board of trustees, are distinct and separate in personnel and location. If this sentiment is strong enough to interfere with the usefulness of the schools, by keeping away pupils who should have the benefit of them, as the specific names of the schools are scientifically correct and entirely sufficient without a generic name, there would seem to be no valid reason for retaining the latter.

In our own special work, doubtless, every superintendent has the same sentiment to meet and overcome in the minds of parents whose children are feeble-minded. How seldom parents recognize the children that develop more slowly than their brothers and sisters as feeble-minded, even when in many cases the children are idio-imbecile. It is so common for the feeble-minded as well as the insane to be considered as belonging to a different kind of beings, that when the object lesson is in one's own family it gives a meaning never fully understood before to the term feeble-minded.

NOTES AND ABSTRACTS.

IDIOTS SAVANTS.—Dr. F. Peterson in *Popular Science Monthly* for December, 1896, discusses this subject under the following "aptitudes:" Arithmetical faculty, musical faculty, special memories, imitative faculty, modeling faculty, delineative faculty, faculty for painting, aptitude for games (draughts etc.), aptitude for buffoonery, which arrangement is presented as convenient for examining the cases, a number of which are described. He gives the following conclusions: "The aptitudes described above as not infrequently encountered in idiots are all of rather low order. They are never found in any but the congenitally defective, who usually present the stigmata of degeneration. They consist chiefly of great powers of memory, visual or auditory, and of facility in imitation. There is no spontaneous invention. The *idiots savants* are mere copyists in music, modeling, designing, or painting, yet at the same time their talents stand out in strong contrast to their general feeble-mindedness. As a rule, the aptitudes are precociously developed, and are frequently lost before reaching adult life. The physical basis of such talents must be a precocious perfection of the cerebral organization in certain areas, together with a true hyperplasia of tissue in such regions, and a tendency to degeneration. There must be an increased number of cellular elements and sensori-motor combinations and associations in definite parts of the brain. Cases have been described in cerebral pathology of misplaced aggregations of such tissues in the brain under the name of heterotopia of gray matter, and it is possible that some such unequal distribution of the structures underlying psychological processes will be found to account for the presence of the extraordinary talents of *idiots savants*."

ANOTHER IDIOT SAVANT.—There died December 3d, 1896, in the poorhouse at Palmyra, Missouri, aged forty-three years, a negro who possessed as remarkable a memory for words, without intellectual qualifications as the black prodigy, Blind Tom, displayed for musical notes and bars. Though he could neither read nor write, and was in all other respects an imbecile, he had a remarkable memory for spoken words, and, it is said, he could recite word for word, chapter after chapter of the bible. Whatever he heard read he immediately committed to memory, and never forgot it. His remarkable memory has been put to severe tests on numerous occasions, and never failed him. He recited columns of a newspaper after having them read to him, it is said, but once.

ALIENIST AND NEUROLOGIST.

THE BRAGGART.

Out from a tomb crept vice with hideous leer;

“I am Heredity,” he said, “whom all men fear.

I sleep, but die not; when fate calls I come,

And generations at my touch succumb.”

A lofty shape rose sudden in his path,

It cried “You lie!” and struck at him in wrath.

Heredity, the braggart, stark and still,

Fell prostrate at the feet of mighty Will.

Ella Wheeler Wilcox—(From Munsey).

DR. E. SEGUIN'S WORKS TO BE PUBLISHED.—Dr. Bourneville, of Paris, is preparing to publish all of Dr. E. Seguin's earlier works and a new edition of “Idiocy.”

It would be a boon to the profession for some one to publish another English edition with index and classified subjects.

A PECULIARITY IN THE SHAPE OF THE HAND IN IDIOTS OF THE “MONGOL” TYPE is the name of an interesting illustrated article in Oct. 1st *Pediatrics*, by Dr. T. Telford-Smith, Lancaster, England, from which we quote: “The peculiarity in the shape of the hand, to which I wish to call attention, exists in the little finger and con-

sists in a marked outward bowing or curve of this finger. (Illustrative Photo-Engravings are given). * * * From it we see that the second phalanx of the little finger is considerably shorter than normal, and there is much lateral displacement of the terminal phalanx. This curve of the little finger occurs to a greater or less degree in nearly every case of Mongol idiocy I have examined, so that I think it may almost be looked upon as one of the constant peculiarities of this type. The degree of the curve is not in proportion to the degree of idiocy of the case; it seems to vary in each."

FROM THE INSTITUTIONS.

ILLINOIS.—A new school building at the Asylum for Feeble-Minded at Lincoln, a cut of which appears in the sixteenth biennial report, is a substantial improvement. Average attendance for 1894-5 578.52.

The following is quoted from the report of the trustees:

"Farming on a large scale has been practically abandoned. It is the opinion of the Trustees that the raising of wheat and corn to sell as a matter of profit from a farm connected with a state institution is barren of good results. Attention is now being directed to the raising of produce and vegetables that can be consumed at the institution. It is to be hoped that the change will be beneficial to the state, and that the "Farm Colony" fad will prove a success in some way."

If the attempt to raise produce for sale has been the object of the farm, it is no wonder that the term "fad" is applied to the plan.

We do not, however, think any such an idea is generally advanced among the advocates of farm colonies for Feeble-Minded. It is *because* the school furnishes a *home market* for everything produced by the farm, garden and dairy, that it becomes economical to utilize the work of the boys in their production. The *first* consideration generally advanced, however, is to provide *suitable* homes and employment to the boys who have received as much training as they are capable of receiving, reasonable time and expense being considered, and who can not obtain and retain places outside.

INDIANA.—Superintendent Johnson has thrown his characteristic enthusiasm into the work at Ft. Wayne, and the report for year ending, Oct. 31st, 1896, is full of interest. The following points are made prominent: Enrollment at above date 553, of which number, 321 attend school. There are 157 classed in the industrial department, 166 in the "upper custodial" and 89 in the "lower custodial" department.

An ingenious statement of the relative cost of the several departments, as compared with the value of the labor performed by the corresponding inmates, is made, by which the net cost is stated as *nil* in the industrial departments and \$200 per capita in the school department. Buildings for custodials, 100 in each, are recommended. Proximity to the Ft. Wayne Medical College affords the gratuitous services of an able corps of specialists, as consultants and clinics are held at the institution. Medical and dental internes are special features. A farm colony of 54 boys, termed "Colonia," is referred to.

IOWA.—The value of the building destroyed by fire on August 29th, 1896, resulting from lightning, was about \$125,000. The Executive Council authorized the expenditure of \$40,000 to assist in rebuilding; \$72,900 is asked of the Legislature, which is favorable to granting it.

KANSAS.—The "Asylum for Idiotic and Imbecile Youth" at Winfield has been having a checkered career. On July 1st, 1895, Dr. and Mrs. Newlon succeeded Dr. and Mrs. Pelcher as superintendent and matron. From the spirit and recommendations in the 8th annual report, it appears that the period of degeneracy has passed. The school rooms have been "rehabilitated" and new life has been infused into the institution. It is gratifying to read in the report of the board the following statement:

"It would seem that the time has arrived in Kansas when the State charitable institutions should be divorced from politics. Men capable of managing one of our insane asylums, and who have made the care and treatment of the insane a study, are not readily found, and when they are, their position should not be subject to the vicissitudes of partisan politics. The attendants, or working force, in these institutions should be selected just as the

merchant, the farmer or the manufacturer selects his help, with qualification, adaptability and experience as the test. The same is true of the other state institutions. Those who secure and hold their positions through what is termed "influence" seldom contribute to the better discipline or successful management of an institution."

KENTUCKY.—STATE SCHOOL NEAR FRANKFORT.—"On April 15, 1896, the stable, a large structure, was destroyed by fire. It was the work of an incendiary as it occurred in the day time, and there was no fire in or about the stable. It was insured for \$800.

"On September 1st, 1896, the large main building, recently erected, was destroyed by fire. It was also the work of an incendiary, as it caught in the attic, where there was no fire. This building was insured for \$55,000.

"On the night of September 11th, 1896, only ten days after the main building, the frame structure, erected originally for shops, and in which all the inmates of the main building had taken temporary quarters, was burnt, the inmates escaping with great difficulty with the loss of all their personal belongings. This was also the work of incendiaries, as was afterwards discovered.

"The school is now located in a country house about a mile from the grounds of the institution, in a very crowded condition. The commissioners have decided to rebuild on the old site, at a cost of about \$50,000. The stone foundation is nearly completed. It will be late next fall before the building will be finished.

"It was not until the house in which the children are now quartered, was set on fire, and barely escaped destruction by a timely discovery, that the authorities were sufficiently aroused to make a determined attempt to discover the perpetrators of the various fires which have preceded the last attempt. It was then found that two boys who had a supposed grievance admitted their culpability, and they were immediately sent away. Since then there has been no trouble." Dr. J. P. Huff has been in charge since March 11th, 1896.

MASSACHUSETTS.—The forty-ninth annual report of the Massachusetts School for Feeble-Minded at Waltham, contains a clearly stated, forcible exposition of the need for a large tract of land for a colony, by Dr. Fernald, eloquently seconded by the Trustees, who ask for 1,500 acres of wild, uncultivated land.

Number present Sept. 30, 1896, 425.

At Barre, Dr. Brown is planning for a new hospital building.

NEBRASKA.—Dr. J. T. Armstrong, to whose indefatigable labors the establishment of the institution was largely due, yields the superintendency of the institution to Dr. C. P. Fall, under the changed personnel of the state government. The control of the public institutions is vested in a state board, consisting of the commissioner of public lands and buildings, secretary of state, state treasurer and attorney general. It is understood that every place in the institution is to be filled by a new person. The average number in attendance for two years ending Nov. 30—96 was 208. Dr. Armstrong makes, in the report, a strong plea for custodial room and additional land. Land has been leased heretofore. \$30,000 each for two new buildings is asked, and \$13,000 for land.

NEW JERSEY.—The Institution for Feeble-Minded Women has a new organ in assembly room, and asks for a new hospital pavilion. Each child taking part in the Christmas entertainment was presented with a potted plant, an improvement on the idea of giving bouquets.

WISCONSIN.—The Wisconsin Home for Feeble-Minded, created by the act of April 9th, 1895, and located at Chippewa Falls, has acquired a tract of land comprising about one thousand acres, mostly tillable, and four hundred acres of which are highly cultivated. One hundred acres covered with oak groves will form a park. About \$5,000 has been expended upon the grading and beautifying of the grounds. The water supply is derived from springs, which furnish, by gravity, 350 gallons per minute. The buildings are one mile from the depot of the Wisconsin Central R. R. Those completed, consist of (1) a building to be used tentatively for administration, but constructed with reference to ultimate custodial requirements; (2) a boys' dormitory; and (3) a pumping station. The present capacity is 300.

Dr. A. W. Wilmarth, (who, by the way, needs no introduction to the readers of the JOURNAL,) has been appointed Superintendent. The Board of Control were anxious to find an experienced man and the best person available, without reference to politics. It is understood that the governor heartily approved of this policy. The state is to be congratulated upon this auspicious beginning.

Journal of Psycho-Asthenics.

VOL. I.

MARCH, 1897.

NO. 3.

ORIGINAL ARTICLES.

THE LATENT TENDENCY TO CONVULSIONS AFTER A PRIMARY ATTACK.

J. W. BAILEY, M. D., FARIBAULT, MINN.

The consideration of this subject in its broadest sense is hardly possible from a review of the cases in one school alone, or, in fact, from all the schools devoted to the feeble-minded, but must come as a deduction from the cases of the general practitioner of largest experience among all classes and in all conditions of life.

Having noted the large proportion of cases of imbecility and idiocy with a history of convulsions, generally early in life, it might not be unprofitable to search for the relation these attacks bear to epilepsy proper.

Of all the inmates admitted to the Minnesota School during the last ten years, some 785, 274 or 34.8 per cent. give a history of infantile convulsions and permanent epilepsy. 46 of the 162 deaths occurring during the same length of time—or, in other words, 34 per cent. of the deaths, have been from epilepsy or convulsions. The ratio between those admitted and those having a history of convulsions or epilepsy is the same as the ratio of the total number of deaths to deaths from convulsions. Remark is often made as to the large number of our inmates dying of epilepsy, but with such a large proportion giving convulsive histories, it is not at all surprising.

In 55, or 20 per cent. of the 274 cases mentioned above, there is no history of recurrence of the seizure, while in 22, or 8 4-10 per cent. of the 274 cases, there has been recurrence of the convulsions in permanent epilepsy after a period of from two to eighteen years. In the remainder of the 274 cases, or a little more than 71 per cent. the primary attack was the beginning of permanent epilepsy.

The 22 cases, or the 8 4-10 per cent. are those of special inter-

est here, of which cases I present four in order to show the relation between the primary and secondary seizures.

No. 24. Female. Second child. Born in Sweden. Feeble-mindedness in family two generations back. The maternal grandparents were own cousins. The child was "bright and lively" until two years of age. From two to five years of age suffered from convulsions. From that time until fifteen years of age she was free from seizures. At that age, epilepsy became established, the spasms occurring five weeks apart and at night. The child died at the age of twenty-five in *status epilepticus* with symptoms of cerebral hemorrhage. She was in the custodial department.

No. 697. Female. Convulsions at two years with right hemiplegia. Convulsions recurred during an attack of whooping-cough at the age of eight. Since then the child has suffered from epilepsy, the seizures averaging one a week. She is now twenty-one years of age.

No. 318. Male. Fifth child. Spasms during infancy, with right hemiplegia. Spasms recurred suddenly at the age of nine. No cause given for recurrence. Died the same year of marasmus.

No. 242. Female. Peculiar from birth. Convulsions at nine months, probably from teething. When eight and a half years of age convulsions recurred. No cause given. From that time true epilepsy developed. The child is now nineteen years of age.

Of the twenty-two cases, thirteen are male and nine are female. In all these cases epilepsy was established at the secondary seizure. In fourteen of the twenty-two the onset was before the age of ten years; in four, between the age of ten and twenty years, while in the remaining four the exact time of recurrence is unknown.

The occasion for the development of epilepsy was, in the twelve cases, an acute sickness, measles and teething showing the largest proportion. In three cases there was hemiplegia. As to family history, four show marked neurotic tendency. The others are negative.

The presumption is, that we have to deal with children whose bodies and nervous systems are extremely weak, as the history of the cases considered, in so far as the history could be obtained,

would indicate. There is also other evidence of this. A careful survey of the death rate in these twenty-two cases places it at 32 per cent., while that of all others having an epileptic history is 18 per cent.; thus showing the mortality of the first to be nearly twice that of the second.

The percentage of recurrence is small, but we can safely put it at 8 per cent. among institution children with epileptic history. The percentage, though small, is to be considered in statements to parents regarding children who are under ten years of age and have had infantile convulsions.

A review shows the following conclusions: First, there is danger of a recurrence of convulsive seizures, establishing permanent epilepsy, this danger diminishing as the child enters the second decade. Second, the children having such recurrence present a higher rate of mortality than those having epileptic history but no recurrence.

TRAINING SCHOOLS FOR ATTENDANTS.

DELIA E. HOWE, M. D., FT. WAYNE, IND.

Two questions naturally present themselves with reference to the establishment of Training Schools for Attendants in institutions for the Feeble-Minded.

1st. Is training for such work as theirs necessary?

2d. How may training be most effectively given?

In considering the first question we may ask, whether the duties of attendants in institutions for the Feeble-Minded are such as are common in the experience of the classes of people from whom such employes come? If for argument we grant that they are, we must still admit that the wide variations of applicability of those experiences to their present duties are such as to demand the keenest insight, judgment and skill, and indicate a need for assistance. The aim of training is as much the expert use of knowledge as its acquisition.

But how is it possible to assume that the duties of attendants are familiar to them through past experiences? How many attendants have thorough knowledge, before undertaking their work, of the laws of hygiene? How many of them know anything of

the principles of nutrition? How many of them can give a bath properly? Do two per cent. of them know what massage means? Can one in ten observe and report symptoms with any degree of accuracy? In even so simple, yet important a matter as the care of the teeth, have one-half of them been educated? Do more than a few of them know the importance of the elimination from the body of its waste matter and recognize morbid appearances of the excreta? Do all of them understand thoroughly the principles of ventilation? Is one of them well up in the knowledge of "first aids to the injured?"

Yet how important that those who have the care of children so often physically as well as mentally defective, should have an intelligent knowledge of the physical needs of their charges.

Concerning the few children who are so ill as to require hospital care and the frequent attendance of a physician, minute instructions may be given on every point of care and treatment; but for the treatment of the many the physician himself must depend largely on the attendant's observation, knowledge and skill.

We recognize the importance of training for nurses for the sick, because such training relieves the physician of many details, and supplements his knowledge by the nurse's careful observations; but, chiefly, because it insures intelligent reception and exact following of the doctor's instructions. "Observe, report, follow orders." This is the creed of the well-trained nurse, and the aim of all her training. Prophylaxis rests largely with her—cure, with her and the doctor—and medication, with the doctor alone.

If it has proven wise to train people to carry out instructions that in the nature of things may be given with great definiteness and precision, how much more necessary it would seem to be to train them to carry out instructions that must necessarily be somewhat vague, general, and dependent on circumstances; requiring, according to their greater indefiniteness, the greater judgment.

It is generally admitted that idiocy, feeble-mindedness and epilepsy, are the results, near or remote, of nutritional disturbances; and, if so, all hygienic measures become of the utmost importance in treatment. Diet must be suited to individual cases, yet general principles recognized. How shall these principles be known unless

they are taught? Exercise must be adapted to the individual, and judiciously given with reference to the weakest parts. Baths, electricity, massage are all indicated. Perfect ventilation must be secured without drafts, and upon the attendant must the carrying out of all this devolve.

But aside from the knowledge required for the physical care of their charges, attendants must know something of the laws of normal mental development, and recognize departures therefrom—else, how shall they apply the mental gymnastics which are as important for the training of the weak intellect as are physical exercises for the development of muscles. As in one individual a certain group of muscles is weak, and in another individual another group, and the same exercises are not applicable to all, so in one child certain parts of the intellect call for more training, and in another child other parts. For instance, the child whose word memory is good, but whose perceptions and sight memory are defective, should not be set to committing poetry; but rather to some progressively difficult task of original description. For such a child to tell what he has seen in his walk to the woods is infinitely better than the repetition of a text.

Perhaps more than any other one hygienic measure, the cell nutrition of the brain depends upon happiness and relief from mental irritation. The attendants should be trained to recognize the fact that it is physiological for the child to become tired by a forced and distasteful task long before he has exerted the same energy that it would require to tire him in play. Attendants should know why epileptic seizures are few during amusing entertainments. The reason is not that these conditions are controlled by the will, but that pleasurable occupation stimulates the brain cells to more active nutrition. The attendant then should be trained to avoid all irritation of the child, and to seek his pleasure as far as possible. It is easy enough to tell an attendant to do this. To train her to do is quite another matter.

From a scientific standpoint we must demand the training of attendants. I am inclined to give to the trained nurse of to-day much credit for the recent rapid progress of scientific knowledge. Her careful observation and complete records are invaluable to the

physician during his treatment of cases as well as at the autopsy. Much more important, it would seem that these children, many of whom cannot describe their own symptoms, should have them skillfully observed and recorded.

How does it advance knowledge to discover, post-mortem, lesions of which the symptoms have been overlooked during life? And how is it possible for the physician to observe and record the symptoms of which he sees so little, with anything like fullness? His observation and his post-mortem findings are too likely to be separate facts that with each other have little to do. He needs the help of the attendant to digest these masses of facts into learning. For example, the physician rarely sees an epileptic spasm himself, yet seldom are attendants able to describe a fit accurately. Without training they do not recognize the points of importance, and all our knowledge of epilepsy, and its practical treatment, are thus hindered.

In the task of individualizing, the attendant must become the physician's instructor as well as his pupil. The natural disposition of a patient is often in abeyance in the presence of the doctor, and, however wise and discerning we may be, we shall be still wiser to acknowledge that we may learn something from a skilled attendant. Let us constantly bear in mind that against the monster of degeneration we are preaching the gospel of regeneration by the results we accomplish, with faith and patience must we lead those little ones painfully back toward the path from which bad heredity and evil circumstances barred them, and we cannot afford to let our all too slow progress be blocked by inefficient and unjudging assistants. Inasmuch as the work of regeneration is most God-like, let it be done in thorough, Christ-like ways.

In proportion to the value of the material to be used in any given work should experiment be disallowed, and definite instructions followed. We would not give silk to a girl for her first attempt at making a gown. If, however, silk were the only available material for such use, we should watch the work much more carefully, and give more detailed instructions than if a calico gown were being made—for in the latter case the spoiling of a few yards would be less grievous.

Unfortunately, human beings are the precious and only available material for the attendant to use in learning her profession—and by what unspeakable consequences may her mistakes be followed. How important, then, that she should be under the constant direction of one skilled in the work. That first of all she be taught right theories so far as past experience has given them to us. That she be imbued with a sense of the importance of her tasks, and that her responsibilities be presented to her with full force. This cannot be done with an occasional talk, or by a book of rules. It must be impressed daily, hourly, by precept and example; by watching and correcting; and this brings us to the consideration of our second question, namely, how may training be most effectively given.

After much experience, both as teacher and pupil, with didactic instructions on such subjects as are naturally presented in courses of training for nurses and attendants, I am forced to admit that I have rarely seen real benefit result from lectures that were not followed by practical instruction at the bed-side, or in the ward, showing the application of the theories and principles taught.

The man who learns to swim on his library table may profit by the exercise, but the attendant who dozes through a lecture on what to observe in epilepsy will have his mind little strengthened by his spasmodic and often pitiful efforts at listening, and his description of the next fit he sees will indicate the condition of clonic spasm into which the unwonted exercise has thrown his wits.

Yet in training schools we cannot profitably dispense with didactic instructions. They serve as the cement to hold together in proper relations the isolated facts observed. We might call them the seeds of instruction; but the planting, cultivating and watering of the seed is the practical application of the lectures; and it is just in this that most training schools for the insane and feeble-minded are at fault.

In establishing training schools, a matter of prime importance is the selection of material for training. This must be from an intelligent, fairly educated class, physically well, and able to realize the beauty of health. Applicants must have sufficient refinement and good taste to be willing to dress according to their

work. They must have high ideals—the “Instinct within that reaches and towers.” It must not be said of them that “No deed will they do, no word will they utter, till they’ve weighed its relation to plain bread and butter.”

Being of such a class they will have rights which even the State is bound to respect. One of these will be the right to an eight, or, at most, a ten hour day. So long as this right remains ungranted, in the very nature of things, training schools will not be successful. Intelligent people realize too well how impossible it is for the ordinary person to work from thirteen to fifteen hours a day at tasks requiring thought and patience, and not learn to shirk or grow irritable. Naturally, conscientious people shrink from accepting positions which bid so little for thoroughness. There is no energy left after these long hours of labor, often of the most soul-wearing kind, to expend in learning either the science or the art of their work. To get through the day somehow—anyhow—becomes the aim of life. A mere suggestion of study seems insult heaped on injury. Is it reasonable to expect growth in knowledge, wisdom, or patience, of people who are associating for fifteen hours a day with feeble-minded children? Of people who, if they secure eight hours of sleep, have but one or two hours in twenty-four for recreation, study, social intercourse or personal affairs? Retrogression under such conditions would seem inevitable. And yet the very characteristics most essential for a good attendant, namely, sweetness of disposition, clear-headedness and gentleness, are the ones most quickly lost, in fact almost impossible to retain, under such conditions.

When the three-eight principle (eight for work, eight for recreation and eight for sleep) is recognized by the State, we may hope to approach our ideal for training schools. Improving study will then become a favorite recreation for all who are fit for the duties of attendants.

After securing the right people as pupils for our training school, and granting them conditions that will tend to keep them right, we have next to select the teacher. Nor must we indulge the fancy that a class of good attendants, and a few indifferent lectures by the doctor, make a training school. Such a fancy is not conducive

to progress. In many of the branches to be taught in a training school, the doctor is not skilled. He may enjoy all the neatness and daintiness which the trained nurse conjures up around her, while he is utterly unable to bring about such conditions himself.

The most important of all training for attendants, as well as nurses, is that which develops in them a love for neatness, order, daintiness, refinement, gentleness and sweetness of disposition. Pupils of such a school should be made to understand from the first that their success will depend on what they themselves are, or are able to become; and that lectures on table manners, if such are defective, are as much a part of their education as lectures on epilepsy. In short, they must enter the school as pupils, ready to be taught anything in which their teacher recognizes a deficiency, from the care of their own health to the ethical training of their charges.

It may take them some time to learn that the gentle voice and the quiet manner, so far from being antagonistic to firmness and authority, are the supports of these; but in time they will acknowledge that this is true. They will learn also that the refinement that suggests a daintily served meal even to an idiot, is not incompatible with spontaneity of feeling and a royal good time.

Attendants who are not courteous to one another and to the children can never teach courtesy to the latter, and the great aim of our work with these children is to bring them into more nearly normal relations with those about them—to diminish in their mind the relative importance of the "ego," by increasing the attention they pay to the people and things about them. I believe this can in no way be better accomplished than by teaching them to observe at all times little ceremonies of politeness; always, of course, impressing upon them that such ceremonies are but translations of the heart's loving kindness.

The attendant who roughly orders a child to "get up," and helps himself to the latter's seat; who treads accidentally on a child's toe and fails to beg his pardon; who forgets to say good-night affectionately and good-morning cheerfully, is failing in the most important part of her duty as an educator, even though she be ever so scrupulous in demanding from the child the strictest

obedience and constant consideration of her own personal dignity.

But where shall we find the teacher capable of training attendants in so broad a field, including etiquette, ethics, elementary psychology, hygiene and nursing, as well as one who understands other needs of the special work for the Feeble-Minded?

Doubtless the trained nurse of to-day has the best foundation on which to build in making such a teacher. Much of her own training has been along the desired lines; but without actual experience in caring for the feeble-minded she is but half prepared. There seems in this emergency to be but one way open, namely, to choose a trained nurse, the most intelligent and refined of her class, and give her special training or experience with the feeble-minded. When she has become familiar with this class, and their peculiar needs, she may be made superintendent of the training school. Then be careful not to meddle. The doctor may give his lectures; the superintendent of the training school will see that they are practically applied. He may issue his orders; the superintendent of the training school will take pride in seeing that every detail is attended to. In addition she will teach the many things that the doctor cannot teach. She should have full power of selecting pupils for her school, of the fitness of whom she must necessarily be the best judge, and of discharging the unfit. She must be responsible to the superintendent of the institution, and to the doctor, for results, but not for details. She should do her work in her own way—advised, if necessary, but not dictated to.

I realize that there are objections to be met, and that much that I have striven to place before you may seem fanciful and impracticable.

First, where shall such material as we require for pupils in our school be found in sufficient abundance? The answer is, that where it finds proper conditions for its growth it will appear, and ours is to prepare the soil.

However repugnant, it remains a fact that the mass of citizens to-day believe that only coarse, unsympathetic people would voluntarily accept the position of attendant upon the insane or feeble-minded; and I believe we must acknowledge that to voluntarily choose such work means either a blunting of the natural feelings

or else a noble rising above merely emotional sympathy to that loving kindness whose expression is in deeds, not tears; and that people of the latter class are not sufficiently abundant in any of our State Charitable Institutions.

That to be a trained attendant means to be a trained lady or gentleman, will of itself be a large lettered advertisement to people of high ideals, inviting such to enter the profession.

Let us see to it that fit conditions of growth are offered, and the supply will soon exceed the demand.

But all this means, you say, added expense to the State. No doubt. So do pathological laboratories; yet all the States are establishing the latter, because the Superintendents of the various institutions are convinced of the necessity of pathological work for the advancement of science. But if laboratories are necessary means for making work practical and effective, training schools are just as necessary for making the laboratories practical and effective.

The question is not, will the State meet the additional expense; but, will the Superintendents recognize the necessity for the better care and education of the children, and more complete observation and records. The States will do in time whatever the Superintendents say should be done. But one Superintendent alone can accomplish little. Concerted action is important.

The additional expense would be less than appears, since during their apprenticeship to so honorable a calling attendants would work for less wages. The increase in numbers for the purpose of shortening hours would increase the pay roll somewhat; but surely such a movement must have the support of all for humanitarian reasons, as well as for the greater efficiency it would lend to the workers.

Only by meeting necessities as such, and boldly urging the reasons for our demand, shall we gain from the State that which will enable us to give back to the State more than value received.

In closing I can but urge the importance of starting rightly. There is danger of mistake and failure, even with the plan I have tried to present; but without an efficient head the training school is bound to fail. It seems wiser to attempt nothing in the name

of a training school until it can be rightly done. Failure means discouragement, and discouragement checks progress—not only our own, but that of others.

Wit and repartee are not infrequent among the nominally feeble-minded, as most people not accustomed to their care might think.

The following has been going the rounds of the daily and weekly press:

The petty quarrels and disputes among the children at the Glen Ellen Home for the Feeble-Minded are oftentimes ridiculously funny and still very pathetic. Two little boys became involved in a wrangle over a game of marbles the other day, and one made the assertion most positively that he had not “fudged.”

“You did, too, I saw you,” declared the other.

“Aw, go on, you feeble-minded kid you!” retorted the boy whose veracity had been questioned.

“Huh!” snorted the other contemptuously. “Talk about being feeble-minded! You’re a regular idiot, an’ I’m only an epileptic.”

—*San Francisco Post*.

At the Faribault school a teacher was one day trying to develop ethical ideas and remarked by way of illustration that some boys were very coarse and acted like animals instead of young gentlemen. One of the pupils who was notorious for prevarication piped up with the question, “What kind of an animal am I like, teacher?” One of his companions slowly turned his face toward him and placidly observed, “I think you are a ‘lyin’ (lion) most of the time.”

ATTENTION.

ALICE M. SPRINGER, ORANGE, N. J.

The lack of the faculty of attention being a chief characteristic of the feeble-minded child, one of the first problems a teacher finds confronting her is how she shall gain the attention of her children. The impressions conveyed to the child's brain being so feeble because of his defective senses, all one's ingenuity is often taxed to its utmost to find some simple exercises that shall first attract and then hold the wandering mind.

The attention of most children may be aroused quickest through the sense of sight; but to hold it long one must appeal to more than this one sense. Following naturally in the train of attention come concentration, quietness, self-control and obedience; therefore we cannot value this too highly if we are to have satisfactory results from our work with these children.

With a class of high-grade children, I tried, just before the close of the school year, with satisfactory results as far as the work was carried, some of the simplest of the exercises mentioned in Miss Catharine Aiken's book on mind concentration. Among others this: I drew upon a swing blackboard a large square, dividing it into four smaller ones, in each of which I drew a different figure; something like this, and allowed the children to see it for a very short time; shortening this at each repetition of the exercise, I then reversed the board and asked them to tell me the position of the different figures. What was in the left-hand upper square? What in the lower left-hand square? In which square was the star? et cetera. Varying this exercise I used it many times. All the children were eager to answer, and some of the boys would often say "turn the board over now," priding themselves upon their quickness in committing the figure to memory. One and two columns of simple numbers were also tried with similar results, and I felt that this book would be a valuable aid in teaching our high-grade classes. With these children their attention was attracted by the appeal to the simple sentiment of curiosity, strong in most feeble-minded. The intensity and duration of the

×	
O	*

attention was according to the stronger or weaker appeal made by the exercise to such sentiments as interest, ambition and emulation.

With low-grade children the sentiment of curiosity is often very responsive to an appeal. I have found an air of mystery very effectually arouses this; sometimes with very queer results.

One morning after a bat's nocturnal visit, I found my class of large low-grade boys very restless. After silently looking at them for a few moments, and when nearly all, attracted by my silence, were looking at me; I said slowly, solemnly, and in a voice that hinted, as much as I was capable of, at the mysterious, "boys, what do you think came into my room last night, when all of you were asleep?" After a moment of silence one boy asked, in a whisper, "The Holy Ghost?" I shook my head, slowly and silently. Another pause. "The Devil?" came another whisper. Again I shook my head. A third leaning eagerly forward, his eyes big and round, asked hoarsely, "Doctor ———?" mentioning one who had recently died.

This shows, perhaps, as much as anything, how much depends upon little things, tricks of voice and manner, in attracting the attention of the low-grade children.

Next to the feeble-minded child's *lack* of the faculty of attention, the instability of that attention when once gained is most baffling. When we think we have him interested we are surprised by a question or remark that shows the frail mind has wandered, or skipped we might say, so quickly it goes, to a far-distant subject, and before we can breathe, another new one is occupying his whole thought.

Thus we see the second phase of the problem is as great, yes, possibly greater than the first, and to teach the child concentration is no small tax upon our resources.

Following are notes of some extremely simple exercises, given to three little girls:

One, who when she came to me would repeat in parrot fashion every word of direction given, without obeying at all that direction, now, after four months, follows all directions well. The other day she said to me, after taking her place at my side: "I didn't say 'Rise,' did I?" Rise! having been the first direction given her

and which she for some time repeated automatically with no idea, apparently, that *she* was expected to perform an action, though the meaning of the word was known to her, as was ascertained at once by experiment.

Many days passed before she realized fully that *she* was to rise and standing still await another direction. She would reseat herself or come to me. When she arose one day at the word given and half way to me stopped suddenly, *remembering* she had not received any direction to do other than rise, I felt that hers was not that much to be dreaded, automatic following of direction.

The direction, open your mouth, was answered by a slight opening of the lips to allow a repetition of my words, accompanied by no change of expression in her face. When that direction had made an impression on her brain and she would open her mouth, the next step was to have her concentrate her small power of thought to keep it open until word to close it was given. How often the lips opened only to close again, even before another word of direction could be spoken! By the time she was told to put out her tongue she had grasped the idea of following direction clearly enough to *attempt* at once to do so. The tongue curled up, it went into one cheek, then into the other; by and by it was put far enough in the right direction to hide its tip between lower lip and gum. Not till something was held up, to be touched by the tongue, was it put straight out. When my finger or a bit of candy was removed, and often-times before, it went automatically back to its place and the lips shut. Now this child opens her mouth, puts out the tongue, puts it in, closes her mouth, waiting for each direction a longer or shorter time as the exercise is varied. She also closes her eyes at command, though with great effort, drawing her face into many wrinkles and keeping the eyes shut but an instant.

This last exercise is as yet almost an impossibility to another child, who has less difficulty in following the other exercises mentioned than the first child. Her eyes roll in every direction when she is asked to close them, and the head turns from side to side and up. Only occasionally can she control herself sufficiently to close the eyes, and they fly open again almost immediately.

Another exercise is the tipping over of a chair, the child keep-

ing one hand on the chair-back and not allowing it to fall to the floor. At first, as soon as R—— felt the balance of the chair depending upon her hand, she withdrew that support and the chair fell to the floor with a bang which gave her much pleasure. Now she will carry out the exercise perfectly, seeming to take a little pride in the noiseless way in which she can cause it to touch the floor. These exercises are often varied, and I believe are helping these children to follow direction and to concentrate their attention upon that which they are doing; for, simple as they seem, they are impossible for them unless they do concentrate their minds upon them. It may not be out of place to speak here of a book of stories which has been found to hold the attention of our children as almost no other has done, Miss Gertrude Smith's "Arabella and Araminta Stories." The plain simple sentences used and their frequent repetitions seem to make these stories particularly pleasing and intelligible to the children.

Some one has happily said, "attention is the stuff memory is made of," so let us aim to have it and of good quality.

REPORT OF A CASE OF EPILEPSY.

MARGARET BANCROFT, HADDONFIELD, N. J.

J. M. when entered in our school suffered with severe attacks of epilepsy, averaging five to six hundred severe convulsions a year. She had been pronounced incurable by several physicians. Her disposition was irritable and it seemed impossible to secure her attention for any length of time to either manual or mental work. She was unable to follow by imitation in physical exercises; in any such work an attendant stood beside her and moved her hands to follow directions. The first real help we were able to give her was at one time when we noticed during the convulsions that severe pain seemed to be in the vicinity of stomach and we thought it was more than probable that the convulsions were caused by reflex action from solar plexis nerves, as much distension was noticed in that region. We gave an enema of warm water and a little salt; relief followed but spasms continued very severe. We watched after she recovered from this spell and found although her bowels

were moved freely, twice daily, that after an enema she had quite a large stool. This made us feel we would try enema once daily and we did so; watched her diet carefully, avoiding bread, that is, giving her a very little of bread and starchy foods; no meat but strong soups, all strengthening diet without much work for stomach. We found that at times she was threatened with spasms; that immediately after an enema she would be quiet; pupils, which had been dilated, became normal and fever left. We continued this treatment with homeopathic remedy, cuprum, and she went exactly one year without any convulsions. Her improvement was wonderful; she sewed beautifully, made an attempt to follow without help in physical work, and has done almost as well as any normal child of her age in all manual work. At the end of the year she again had a very severe attack, and we found she had been given an apple without its being pared and grated. It was the rule to grate her fruit before she received it. This attack was so severe and so weakening that without the physician's consent we tried galvanism, placing positive over the frontal bone, negative over cervical vertebrae for two minutes, and then positive over cervical vertebrae and negative on either hand for two minutes, then positive on frontal bone, negative on stomach for two minutes, then negative and positive in either hand, then reversing the same; at once she sank into a quiet sleep, and the spasms which had occurred every few minutes discontinued for several hours. After this attack passed she went eleven months and then had a return, but not nearly so severe, and we at once had the galvanism used. She had three slight attacks in one month whereupon we used galvanism again. She does not speak although she hears perfectly, and at present we give her daily treatments on throat to see if there will be any response; so far there has not been any change. A period of fifty-three weeks elapsed before the next convulsion, which was followed by galvanic treatment as before. She has not had any other convulsions, but is threatened with them, and we are giving daily treatments and watching her diet very carefully. In place of bread now we give her toasted whole wheat (shredded) biscuits. All of her food is forked and prepared very carefully. When she seems ailing we feed her about every two hours and with nourish-

ing foods. She is beautiful and perfectly developed, fifteen years of age; her change has come very naturally. In school she does well by imitation; can write very well; does nicely in her physical culture; can do several days' orders in Swedish work without any help by imitation; knows everything we say to her, and has improved marvelously in disposition. She sews equal to a normal child; has made herself some underclothing, and embroiders beautifully, but has to have a great deal of care. She does not seem to understand the use of words; at times will be able to write three words from dictation and then does not connect them with the object. We hope the galvanism may help this by increased circulation in the brain cells. She makes us feel that much can be done for the epileptic with close personal care.

The children are placed under the physician's care desired by parent. In this case the father desired the child placed under homeopathic treatment, but we feel, although the cuprum reduced fever, that the enema and galvanism were the main help.

SELECTED.

CONTRIBUTION TO THE PSYCHOLOGY AND PEDAGOGY OF FEEBLE-MINDED CHILDREN.*

By G. E. Johnson, Fellow in Pedagogy, Clark University.

I.

The Greek word *ἰδιωτης* conveyed the idea of isolation of privacy. An *ἰδιώτης* was a private person as opposed to one engaged in public affairs. The word was used later to designate a humble person, then one uncultured, and finally one unskilled, clumsy. As late as the seventeenth century the English word idiot was used in the sense of a private person. "Humility is a duty in great ones as well as in idiots," wrote Bishop Taylor. But *ydiote* and *fool* were terms generally used to indicate either simpletons, or, more commonly, professional fools or buffoons.

Little attention was paid to idiocy by the medical profession

*Reprinted from Pedagogical Seminary, Vol. III, No 2.

before the present century. The first clear definition is given by Esquirol. "Idiocy," he says, "is not a disease, but a condition in which the intellectual faculties are never manifested, or have never been developed sufficiently to enable the idiot to acquire such amount of knowledge as persons of his own age and placed in similar circumstances with himself are capable of receiving. Idiocy commences with life, or at that age which precedes the development of the intellectual and affective faculties, which are from the first what they are doomed to be during the whole period of their existence."¹

The old English law defines an idiot as one who is *non compos mentis*, or of non-sane memory. In regard to the test of a man's idiocy, it says, "It is sufficient to find him so if he has not any use of reason: as if he cannot count twenty pence; if he has not understanding to tell his age; or who is his father or mother."² Blackstone says: "An idiot or a natural born fool is one that hath no understanding from his nativity, and, therefore, is by law presumed never likely to attain any." The property of an idiot came into the custody of the king.

In Europe, all through the middle ages, the idiot was believed to be possessed of an evil spirit or demon. Tradition says that a single hair from the beard of St. Vincent, placed about the neck of the idiot, drove the demon away and restored the idiot to the full possession in his mental powers. In striking contrast was the belief in the east that the imbecile was a sacred being, possessed of something weird, if not divine, in his nature. He was generally the object of kindest care and affection. Among savage peoples the idiot has generally been regarded as one "struck from heaven," and as a consequence has been treated more as a privileged person than an unfortunate. By the Greeks the idiot was left to perish from exposure.

Until the present century, in European countries at least, the lot of the idiot has been a hard one. Deprived of his property by the law, condemned to eternal punishment by the church, aban-

¹"Psychological Medicine," Bucknill and Tuke, p. 150. Cited from observations pour servir à l'Histoire de l'Idiotie, dans les Maladies Mentales. Paris, 1828.

²Quoted in Dr. Howe's Report. 1848.

doned to his fate by the physician, it remained to the student of man to bring the first ray of light and hope to the soul of the idiot. And how came this about?

In very early times it was believed by some that, if a child could be allowed to grow utterly separate from his fellow beings, he would serve as a living prototype of the primitive man. King Psammetichus, an eastern prince, gave over two children to be nursed by a goat, and to be separated from all human beings, in order to decide which was the most ancient of nations. It is reported that the first word spoken by these children was the Phrygian word for bread. Hence the question was decided in favor of the Phrygians.

"In order to decide, if possible, what was the natural and original language of the human race, James IV sent two infants, under the charge of a dumb woman, to reside at the island of Inchkeith; and that there might be no necessity for intercourse with others, caused them to be provided with all the necessities which their situation might require, till the children should arrive at maturity." The result of the experiment is not recorded. The writer says: "Some say that they spoke good Hebrew, but as for myself, I know not but by the author's report."¹ A similar experiment is attributed to Frederick II, and also to a mogul emperor of India. The story of Romulus and Remus was credited by many early historians.

Linnæus studied and compiled the records of ten children who has been isolated from mankind. These wild creatures Linnæus concluded to be a species of the *genus homo sapiens*.²

Dr. Seguin makes much of the famous case of Kaspar Hauser. One afternoon in May, 1828, so the story runs, a boy, apparently

¹Ireland, "On Idiocy and Imbecility." London, 1887.

²Dr. A. Rauber, professor in Dorpat, published, Leipsic, 1888, a book entitled "*Homo Sapiens Ferus*," in which he had collected the records of the wild persons of Linnæus and others. From these records he draws conclusions regarding primitive history, philosophy, politics and pedagogy. He says that the term *homo sapiens* belongs not to man as such, but because of the possibility in him. The primitive man *was* exemplified in these wild creatures. The state is not only the genitor, but the transmitter of culture. Reading and writing came late in the culture of man. He thinks reading and writing are now introduced too early into the school course.

about sixteen years of age, was met just outside the Neue Thor of Nuremberg. He was short in stature and of fair complexion. His clothes were dusty and travel-stained, and his feet were blistered and bleeding as though from a long walk. He bore a letter directed to "The Captain of the 4th Squadron of the Schmolischer Regiment, Neue Thor Strasse, Nuremberg." He could speak and write his name, and could say: "I will be a trooper as my father was." Great interest was awakened and many conjectures were made as to his past history. It came to be believed that he was born in 1812, and that he had spent all his life in a dark and narrow cell, sitting upon the floor or reclining upon his bed of straw. He had never tasted other food than bread and water, or enjoyed other companions than two wooden horses. At the time of his advent in Nuremberg, his feet were without callouses and were as soft and tender as his useless hands. He would eat no meat. The slightest portion of alcohol in his drink made him sick. He could see better in the dark than in the light. His sense of smell was exceedingly keen, so that he could not bear the scent of flowers. For several days he paid no heed to the ringing of church bells, but after that he began to heed and listen, his eyes following the direction of the sounds. Upon hearing music for the first time he stood fixed in the attitude of a statue, and remained so, as if listening, long after the music had ceased. His delight was in wooden horses, which he decorated with ribbons and spangles, offering them also his bread and water. When one of them received an injury he seemed to feel very sorry for it. Prof. Daumer undertook his education and observation. His dormant intellect became very active. He learned everything taught him.¹ "Screwed into the common form of school education," says Van Damenbach, "his mind suffered, as it were, its second imprisonment." He lost his memory, became peevish, fretful and melancholy, a victim of over-pressure.²

¹Seguin, "On Idiocy," p. 409.

²See "Kaspar Hauser," by the Duchess of Cleveland, London, 1893; Seguin "On Idiocy," New York, 1870, p. 407; also "Kaspar Hauser," eine neugeschichtliche Legende von Antonius von der Linde, Weisbaden, 1887. The fact that many accounts in the history of Kaspar Hauser are now discredited does not invalidate the truth of Seguin's conclusions.

Dr. Seguin¹ draws from the history of Kaspar Hauser the following lessons :

1. That idiocy is really isolation, as the Greeks had it.
2. It may be produced artificially.
3. Isolation is so unnatural to man that he will give life to inanimate things and associate his life to theirs sooner than submit to it.
4. It may be aggravated at will by dereliction, and is aggravated by every day of non-treatment.
5. Isolation acts on the hemispheres as well as on the sensorial apparatus.
6. The awakening of the peripheral apparatus awakens the central one.
7. The awakening of backward functions requires great care, lest the organs unused to activity lose their power and be exhausted.
8. What an idiot (born or made up by crime) must first learn for several years, is what baby learned in his first months.
9. Physiological teaching alone can fill up the gap produced by idiocy proper, and years of isolation.

Bonaterre,² professor of natural history in the central school of the Department of Aveyron, France, made researches upon each of the ten savages described by Linnæus, and also upon the so-called Savage of Aveyron. This boy, when captured, was entirely naked. He selected his food by smell, drank water sucking it up like an ox, walked on all fours, fought with his teeth, showed little intelligence and had no articulate language. He was fond of caresses, but tore all sorts of garments, and tried constantly to escape. Bonaterre thought the study of this boy would furnish important facts regarding the original constitution of man, and the development of his primitive faculties, provided that the boy was not an idiot. Pinel, Physician-in-Chief to the insane at the Bicetre, declared the child idiotic. Itard, Physician of the Deaf-mute Institution, asserted that the child was simply untaught. Itard undertook the task of teaching the young savage. He did not believe that idiocy

¹"On Idiocy," p. 410.

²Seguin, "On Idiocy," p. 17.

was curable. His object was not to train an idiot, but to "solve the metaphysical problem of determining what might be the degree of intelligence and the nature of the ideas in a lad who, deprived from birth of all education, should have lived entirely separated from the individuals of his kind."¹

His plan was :

"1st. To endear him to social life, by making it more congenial than the one he was now leading, and, above all, more like that he had but recently quitted.

"2d. To awaken his nervous sensibility by the most energetic simulants, and at other times by quickening the affections of the soul.

"3d. To extend the sphere of his ideas by creating new wants and multiplying his association with surrounding beings.

"4th. To lead him to the use of speech by determining the exercise of imitation under the spur of necessity.

"5th. To exercise, during a certain time, the simple operations of his mind upon his physical wants, and therefrom, to derive the applications of the same to objects of instruction."

Itard did not achieve the results he had expected, and he began to suspect that there were other impediments than mere savagery. Therefore he revised his plan upon the basis of physiology. It was :

"1. The development of the senses."

"2. The development of the intellectual faculties."

"3. The development of the affective functions."

Convinced finally that the savage was an idiot, Itard abandoned his self-imposed task. The French Academy commended Itard for the great progress made in the intelligence of his charge. Itard himself wrote: "You cannot fail to see in the numerous observations I made, a collection of facts capable of enlightening the history of medical philosophy, the study of civilized man, and the direction of certain kinds of private instruction." This was the first attempt to educate an idiot for a philosophical object and by physiological means.²

¹Seguin, "On Idiocy," p. 21.

²Seguin, "On Idiocy."

With Itard's "De l'Education d'un l'Aveyron" really began the literature on the treatment of idiocy. This appeared in 1801. To our own country belongs the honor of the first systematic attempt at the education of idiots in a school. In 1818 several idiotic children were received into the American Asylum for the Deaf and Dumb at Hartford, Conn., and an attempt was made to improve their habits and physical condition.

In 1828 Dr. Ferret began an attempt to teach some of the idiots in the hospital at the Bicetre in Paris. In 1831 Dr. Fabret, at the Saltpetriere, and in 1833 Dr. Voisin at Paris made similar attempts.

In 1837 a young man of twenty-five years began the training of an idiotic boy, with the advice of the celebrated Itard. This young man was Eduard Seguin, born in Clamecy, Department of Nièvre, France, January 20th, 1812. The next year, in company with Esquirol, he opened a private school for idiots. In 1842 Seguin was given the charge of the idiots in the Bicetre. Meanwhile he published several writings upon idiocy, and in 1846 appeared his "Traitement, Moral Hygiene et Education des Idiots." This work was the emancipation proclamation for the fettered soul of the idiot. After the Revolution of 1848, Seguin came to the United States, where his love and zeal for the idiot have received honored recognition. In 1866 appeared his English work, "Idiocy and its Treatment by the Physiological Method."

In 1842 Dr. Gugenbuhl established a school for cretins at Abdenburg, Switzerland. As to the success of Dr. Gugenbuhl's work, there is a difference of opinion. He claimed marked improvement in his wards, and certainly his efforts and work had much to do toward advancing the interest in the education of idiots.

In 1846 Miss White founded the first training school for idiots in England, at Bath. In the same year Dr. F. P. Backus, of New York and Judge Byington, of Massachusetts, brought to the notice of the Legislatures of their respective states the need of public institutions for the training of idiots. During the following twenty years there were opened in the European countries, Canada, Australia and the United States, no less than eighty public and private schools for idiots.

* * * *

Having thus briefly sketched how and for what purpose the training of idiots began, and also the progress of institutions, let us add some of the representative views regarding the causes and classification of idiocy.

CAUSES OF IDIOCY.

Heredity plays a prominent part in the production of idiocy. There are instances of whole families of idiots. Bucknill and Tuke¹ give a portrait of five brothers and two sisters, all idiots. Dr. Howe² mentioned a town in which the authorities hired a male idiot to marry a female pauper idiot. From this marriage resulted three idiotic children, and in consequence of its wise act the town was obliged for many years to support the whole family. Ireland quotes Haller as saying that he knew two noble women who got husbands on account of their fortunes, although they were almost idiots. Their mental defects spread through several families for a century, so that some of their descendants were idiots even in the fourth and fifth generations.

In the examination of two thousand cases, Dr. Down³ found that in 45 per cent. there had been neuroses in the family of one or both parents. In the Canton of Berne, in 1873, 55 per cent. of the idiots were found to have hereditary neurotic tendency.

There is no doubt that consanguinity of marriage has its influence upon the production of idiocy. But the tendency has been to overestimate its importance.

There is much difference of opinion in regard to the influence of drunkenness in causing idiocy. Down and Dahl lay considerable stress upon the part intemperance has to play. Drs. Shuttleworth and Ireland think drunkenness does not play a great part directly. Indirectly, through lowering the physical and moral health, it may be of considerable importance.

The over-burdening of women, according to Seguin, is a prolific cause of feeble-mindedness. Wives becoming anxious and worried over the business affairs of their husbands, carry too heavy burdens to fulfill the function of motherhood. These are the over-faithful wives. There is another class which Seguin describes as

¹ Psych. Med., p. 161.

² "Causes of Idiocy." Edinburgh, 1858.

³ Op. cit., pp. 16-18.

follows: "Their education—a jumble of that which has made all the male inutilities we have known—has not taught them an iota of womanhood. Their hygiene and habits have disqualified them for motherly functions. City and house narrownesses do not offer more room for a new-comer than their slender pelves; their tastes run toward niceties incompatible with married life; fecundation is the result of maladroitness; its product unwelcome, ill-fed, ill-treated, before as after birth, conceived in apprehension, remains a nervous ruin, or disappears in a storm of some sort. At this spectacle we can sorrow but not wonder. Can we expect woman to know what she has not learned, or to resent feelings whose warmth never descend into herself? How, besides, can she conceive and nurture with a living enthusiasm a child she has no strength to carry, no room to grow, no substance to feed, no idea how it is to be handled, cared for, etc.? The heaviest task when it is not the dearest, she shifts it off, coming out of the struggle with a sad countenance and emaciations foreboding early degeneracy of some vital organ. To be frank, we physicians, teachers and parents, are more culpable than herself."¹

Fright, sorrow, deep anxiety of the mother during pregnancy, are often cited as the causes of idiocy. It is probable that emotional disturbance is often the only apparent cause, when there is some other hidden but more powerful influence, such as hereditary tendency. Still, there is no proof that a sudden shock to the mother may not powerfully and permanently affect the foetus, while on the other hand many stories seem to confirm the belief that it does. Ireland says: "In all ages women have believed that fright or extreme distress is dangerous to their offspring, and I see no reason for denying that such influences, during pregnancy, may in many cases produce idiocy in the child of healthy parents who would otherwise have been born free from mental deficiency. One woman lost her husband at sea; another got a fright from a horse running away with a coach in which she was; and another was terrified by the riotous behavior of drunken sailors in a prison, her husband being the jailor,"² and so on.

¹"New Facts and Remarks concerning Idiocy." New York, 1870, p. 27.

²"On Idiocy and Imbecility," p. 32

Women are often needlessly apprehensive and anxious. Common sense and the kindly assurance of a physician will do much to relieve both the anxiety and the effects of the incident which produced it.

The following statistics on the causes of idiocy, compiled by Hermann Piper, are instructive and interesting:¹

In 1,287 cases, of which 860 were congenital, 427 acquired, the following conditions were found:

In the congenital cases: 1. Neuroses in 160 cases (18 per ct.)
a. In the parents, 96 cases (60 per ct.) b. In the grandparents, 17 cases (10 per ct.) c. In the near relatives, 47 cases (29 per ct.)

2. Drunkenness in 82 cases (9 per ct.) a. In the father, 77 cases (94 per ct.) b. In the mother, 5 cases (6 per ct.)

3. Blood relationship of parents in 43 cases (5 per ct.)

4. Additional condition of frequent sickness of the mother during pregnancy, 55 cases (6 per ct.) a. Grief, 3 cases (5 per ct.)
b. Overwork, 3 cases (3 per ct.) c. Emotional disturbance, 10 cases (18 per ct.) d. Fall, 2 cases (3 per ct.) e. Fright, 2 cases (3 per ct.) f. Nervousness, 6 cases (11 per ct.) g. Previous abortion, 3 cases (5 per ct.) h. Premature birth, 7 cases (13 per ct.)
i. Twin birth, 2 cases (3 per ct.)

In 352 cases of acquired idiocy, the following were found as causes:

1. Meningitis, 78 cases, or 22 per ct. 2. Convulsions at teething, 77 cases, or 22 per ct. 3. Convulsions, 58 cases, or 16 per ct. 4. Fall and blow on head, 39 cases, or 11 per ct. 5. Neglected training, 24 cases, or 7 per ct. 6. Rickets, 16 cases, or 4 per ct. 7. Measles, 9 cases, or 2 per ct. 8. Scrofula, 8 cases, or 2 per ct. 9. Worms, 8 cases, or 2 per ct. 10. Small-pox, 7 cases, or 2 per ct. 11. Insanity, 7 cases, or 2 per ct. 12. Typhus, 6 cases, or 2 per ct. 13. Brandy drinking, 3 cases, or 1 per ct. 14. Onanism, 3 cases, or 1 per ct. 15. Injury at birth, 2 cases, or 1 per ct. 16. Ill-usage, 2 cases, or 1 per ct. 17. Perverted training, 5 cases, 2 per ct.

Of 286 cases of acquired idiocy the defect became apparent:

In the first year in 86, or 30 per ct. In the second year in 70, or 24 per ct. In the third year in 30, or 10 per ct. In the fourth

¹"Zur Ätiologie der Idiotie," von Hermann Piper. Berlin, 1893.

year in 30, or 10 per ct. In the fifth year in 19, or 6 per ct. In the sixth year in 20, or 7 per ct. In the seventh year in 6, or 2 per ct. In the eighth year in 4, or 1 per ct. In the ninth year in 2, or 1 per ct. In the tenth year in 6, or 2 per ct. In the eleventh year in 1, or 1 per ct. In the twelfth year in 2, or 1 per ct. In the fourteenth year in 3, or 1 per ct. In the seventeenth year in 2, or 1 per ct. In the eighteenth year in 3, or 2 per ct. In the twenty-fifth year in 1, or 1 per ct. In the forty-third year in 1, or 1 per ct.

The high percentages in the first and second years will be noticed, and the quick falling off after the sixth year.

Of 916 cases idiocy occurred in the first born in 329, or 35 per ct. In the second born in 154, or 16 per ct. In the third born in 166, or 18 per ct. In the fourth born in 101, or 11 per ct. In the fifth born in 54, or 6 per ct. In the sixth born in 38, or 4 per ct. In the seventh born in 28, or 3 per ct. In the eighth born in 17, or 2 per ct. In the ninth born in 14, or 1 per ct. In the tenth born in 5, or $\frac{1}{2}$ per ct. In the eleventh born in 5, or $\frac{1}{2}$ per ct. In the twelfth born in 5, or $\frac{1}{2}$ per ct.

Dr. Shuttleworth and Dr. Fletcher Beach discriminated eight main causes in their examination of 2,380 cases of idiocy. They give the following:

1. Phthisical family history, 28.31 per ct.
2. Insane, imbecile or neurotic taint, including epilepsy, 41.38.
3. Consanguineous marriage of parents or grand parents, 4.20.
4. Parental intemperance, 16.38.
5. Abnormal conditions of mother during pregnancy, 29.87.
6. Difficulties or accidents of birth, (about) 43.00.
7. Injuries to head in infancy, 6.
8. Febrile illness in infancy, 6.
9. Infantile convulsions, 27.39.
10. Epilepsy and cerebral affections, 8.11.¹

F. H. Wines reports on the causes of idiocy the following statistics:²

Aggregate of Cases. General Diseases, 13,295; Fever, general, 1,087; Scarlet Fever, 1,263; Diphtheria, 42; Syphilis, 12; Scrofula, 78; Rickets, 72; Anæmia, 5; Total, 2,559.

¹Quoted in "The Feeble-Minded Child and Adult." London, 1893.

²House Miscellaneous Documents, Second Session Forty-Seventh Congress 1882-83, Vol. XIII, Part 21.

Diseases of the Nervous System. Epilepsy, 2,490; Meningitis, 552; Paralysis, 415; Catalepsy, 5; Chorea, 63, Inflammation of Brain, etc., 584; Abscess on Head, 41; Hydrocephalus, 235; Convulsions, 1,978; Spinal Affections, not specified, 154; Brain troubles, not specified, 57; Total, 6,574.

Diseases of the Reproductive System. Phimosi, 2; Menstrual Disorders, 12; Total 14.

Accidents. Falls, Blows on Head, on Spine, etc., 1,589; Injuries at Birth, 11; Sunstroke or Exposure to Sun, 84; Stroke of Lightning, 19; Exposure, Maltreatment, Overwork, etc., 118; Fright, 360; Burns, 97; Miscellaneous, 1,870; Total, 2,278.

Of 63,132 idiots, 46,874 were congenital. The mental defects of the rest were manifest in

1,576 under 1 year	1,253 at 5 years	1,091 at 10 years
1,924 at 1 year.	887 " 6 "	352 " 11 "
2,626 " 2 years	753 " 7 "	941 " 12 "
1,727 " 3 "	791 " 8 "	234 " 13 "
1,297 " 4 "	397 " 9 "	409 " 14 "

Dr. Wilwarth ascribes fifty per cent. of feeble-mindedness to actual disease.¹

Physiologically, according to Seguin,² idiocy is produced by deficiency of nutrition in utero and in neo-nati. It incapacitates mostly the functions which give rise to the reflex, instinctive, and conscious phenomena of life. The *modus operandi* of deficiency of nutrition, he says, is not known. At the time that the deficiency of nutrition takes place, it stops the foetal process and gives permanency to the transitory type through which the foetus was passing. Hence, the heart may sometimes be nearly homologous to the heart of fishes, or the convolutions of the brain may be unfinished, as in the ourang-outang or the calf. This deficiency of nutrition happens in two ways, slowly, as from depressing influences, or at once, as from a shock. Ireland³ says idiocy depends "upon nutrition or diseases of the nervous centres occurring either before birth or before the evolution of the mental faculties

¹Report of International Congress of Charities, Correction and Philanthropy, Chicago, June, 1893.

²"On Idiocy," p. 39-47.

³"On Idiocy and Imbecility," p. 1.

in the childhood." Idiocy, then, is the condition of arrested development.

As to the pathology, Seguin says idiots are not so much ill-shaped as ill-proportioned. The brain substance in profound idiocy is generally softer and paler, with less distinction between the white and grey matter. The convolutions are shallower and fewer in number. The size and shape of the skull are no criterion of the shape of the brain, nor of intelligence. Harmony is more significant than size or shape. Hence any deviation from the Caucasian type, in harmony of proportions in our children, is indicative of some anomaly in their faculties. In the idiot just born there is little to indicate idiocy, unless it be the often monstrous shape of the head. But after a few months there are many indications: the head rolls, the eyes are glassy or fixed, there is the difficulty in swallowing, absence of voice, flaccidity of the legs, profuse saliva, imperfect sensations, and the like.

The functions of organic life are generally below the normal standard. Respiration is shallow, pulse feeble, appetite abnormal. There is inability to walk, and general muscular infirmities, causing disordered movements.

CLASSES OF IDIOTS.

Esquirol¹ classified idiots according to their powers of speech. The first class uses short phrases or only words; the second articulates monosyllables or only cries; the third utters no phrases nor words nor monosyllables. Esquirol also made two general divisions, idiocy and imbecility.

Hoffbauer divided imbecility into three classes, according to intelligence, basing it upon the power to form judgments.

Dr. Seguin made the first physiological classification. He divided idiocy into two classes:

1st. Profound idiocy, in which there is some abnormality in the central nerve organs.

2d. Superficial idiocy, in which the peripheral termini alone are affected.

¹ Bucknell and Tuke, *Psych. Med.* p., 151.

Duncan and Millard¹ divide into eight classes :

Congenital idiots.

Class 1. True and profound idiots; solitaires.

Class 2. Having slight intelligence, being able to stand and walk a little, and often capable of slight instruction.

Class 3. Able to walk, to run, to use their fingers, to be made to attend slightly, to be able to do easy mechanical work, and to feed themselves; memory and perception very weak and variable in power.

Class 4. Feeble-minded children, adolescents and adults.

Non-congenital.

Class 5. Born with perfect intelligence as with normal children, but having suffered by some disease of the brain, epileptic convulsion, by water on the brain, or by injury to the head.

Class 6. Resembling Class 5. But the evidence of permanent disease of the brain exists in the form of epileptic seizures and paralysis.

Imbeciles.

Class 7. Cases born with hydrocephalus, or in which the disease has been arrested after it has destroyed, more or less, the power of the brain.

Class 8. Cases of perfect individuals who have been educated and who have become debased in mind and body during early youth, from vice.

Dr. Down makes an ethnological classification of idiots.² He cites a negroid family, with characteristic malar bones, prominent eyes, puffy lips, retreating chin, woolly hair, although not black skin. There is the Malay type, with soft, black curly hair, prominent upper jaws and capacious mouths, like the nations of the South Sea Islands. There are a few instances of the North American type. The Mongolian type, says Dr. Down, includes more than ten per cent. of feeble-minded children. The children of this type, when not at all related, resemble each other remarkably. Dr. Down thinks this ethnic classification gives strong evidence that

¹A Manual for the Classification, Training and Education of the Feeble-Minded, Imbecile and Idiotic." London, 1866.

²Wood's "Medical and Surgical Monographs." Vol. X.

the different ethnic families of men are not distinct species. Besides these strong physical characteristics are peculiar mental and moral traits characteristic of the several classes.

Dr. Ireland classifies as follows:¹ 1, Genetous Idiocy;; 2, Microcephalic Idiocy; 3, Eclampsic Idiocy; 4, Epileptic Idiocy; 5, Hydrocephalic Idiocy; 6, Paralytic Idiocy; 7, Cretinism; 8, Traumatic Idiocy; 9, Inflammatory Idiocy; 10, Idiocy by Deprivation.

I. *Genetous Idiocy.* Idiots of this class are generally dwarfish and deformed, especially as to palate, teeth, finger nails, hands and feet, ears and eyes. Presumption of hereditary cause is great, inasmuch as the lesion has occurred previous to birth. The majority of these cases die of consumption. The circulation is feeble, the hands and feet are cold, sensibility is deficient, and sores are slow in healing. They sometimes sit in strange postures, and bad cases have automatic motions.

II. *Microcephalic Idiocy.* All heads which are below seventeen inches in circumference may be considered microcephalic. The relation of the size of the brain to intelligence has always been a puzzling question. Seguin says that Esquirol, Pritchard, and Foville, after thirty years of measuring and weighing the heads of idiots, concluded:²

1. No constant relation exists between the general development of the cranium and the degree of the intelligence.

2. The dimensions of the interior part of the cranium, and especially of the forehead, are at least as great among idiots as among others.

3. Three-fifths of idiots have larger heads than men of ordinary intelligence.

4. There is no constant relation between the degree of the intelligence and weight of the brain.

5. The different degrees of idiocy are not measurable by the weight of the brain.

6. A cranium, perfectly formed, often encloses a brain imperfectly formed, irregular, etc.

¹"On Idiocy and Imbecility."

²Report of the Commissioners on Idiocy to the General Assembly of Connecticut, 1856.

7. Sometimes the brain of an idiot presents no deviation in form, color and density from the normal standard. It is, in fact, perfectly normal.

However, Voisin says that the proper exercise of the intellectual powers is impossible with a head of from 11 to 13 inches in circumference. Heads of 18 to 18½ inches allow of regular exercise of the intellectual faculties. The heads of the famous Aztecs measured, respectively 4½ inches in the antero-posterior diameter by 4 inches in the transverse diameter for the boy, and 4½ inches by 3½ inches for the girl. Children of this class are generally small of stature, even dwarfish.

III. *Eclampsic Idiocy.* Eclampsic idiocy differs from epileptic idiocy in that in the former the convulsions occur in early infancy, generally during teething. These are frequent while they last, but soon cease, allowing the child to recover health. In epileptic idiocy, the fits occur at more distant intervals, but seldom fully disappear. Dr. Ireland thinks that the most common lesions in this class of idiocy are adhesions of the membranes, some wasting of the gyri, especially of the frontal region, and a hardening of the tissue, with fewer vascular spots.

IV. *Epileptic Idiocy.* Idiocy caused by epilepsy is common. This may result from the *petit* as well as the *grand mal*. Yet epilepsy may result in no intellectual impairment. Dr. Russell Reynolds found this true in thirty-eight per cent. of his cases, and in one case there were as many as 1,100 attacks in a year, continuing for seventeen years, without mental failure.

The essential lesion of epilepsy is in the medulla. Many of this class have excellent general health, good appetite, and great strength, and are susceptible of much improvement by training.

V. *Hydrocephalic Idiocy.* Hydrocephalus must not be confounded with hypertrophy of the brain. Both cause enlargement of the skull. Idiots of this class are usually of feeble constitution, but are often more curable than other classes. They are gentle, trusting in disposition as a rule, and are very awkward in their movements.

VI. *Paralytic Idiocy.* These cases are more susceptible of mental improvement than physical. Brain lesions, causing paraly-

sis, may take place before birth. Dr. Schroeder von der Kolk cites cases where one-half of the brain being atrophied, there was still normal use of the faculties. The mental power of these cases depends very largely upon the healthy condition of one hemisphere.

VII. *Cretinism*.¹ Cretinism is a form of idiocy in which the arrested development of the nervous system is caused by the condition of the soil, climate, air, water, etc. It is most common among the Alps. The derivation of the word cretinism is not known. It was thought by Esquirol to be from *cretine*, alluvial soil. Cretinism differs from idiocy in several respects. At birth the cretin may appear free from disease, and, indeed, where predisposition is present, may, under favorable circumstances, entirely escape. Cretinism is endemic. It is more curable than idiocy. In cretinism, both the muscular and the nervous systems are affected in a greater degree than in idiocy. Cretinism is commonly accompanied by goitre.

VIII. *Traumatic Idiocy*. Traumatic idiocy, due to injuries of the head, should be distinguished from inflammatory idiocy; for although a contusion of the head may result in inflammation, it may be small in comparison to the actual injury done the brain, and the inflammation will be centered about this injury and less diffused.

A custom of bandaging the heads of infants has been practiced by many peoples. Great deformities have often resulted from this custom without lessening the intelligence, it has been asserted. M. Broca mentions that this has commonly occurred in the neighborhood of Toulouse, France. There are many instances among the North American Indians, and the Peruvians are noteworthy in this respect.

IX. *Inflammatory Idiocy*. These cases are caused by inflammation of the brain not due to external injury. Idiocy ascribed by parents to fever in childhood, may be due to other causes, especially where they are marks of genetous idiocy, such as vaulted palate and other defects of the mouth.

X. *Idiocy by Deprivation*. In this class Dr. Ireland places

¹Psych. Med.

such cases as Laura Bridgman, Oliver Caswell, Meystre and Kaspar Hauser. It is that condition of the mind in which a child who has been deprived of two or more of its principal senses remains, if instructed.

Voisin divides idiocy into four classes, as follows :¹

1. Complete, absolute idiocy, congenital or acquired. Incurable. Comprises two grades. In the first are the acephalic and those without sense of self-preservation. In the second grade are all those who have the instinct of preservation and fixed habitude.

2. Incomplete idiocy, congenital or acquired. Susceptible of some improvement. This class comprises several grades, according to the existence or absence of certain intellectual senses and motor faculties.

3. The imbecile, congenital or acquired, characterized by the existence of all the intellectual, instinctive and moral faculties, and by the perversion and instability of these faculties.

4. The mentally weak, characterized by the feebleness or by the lack of balance of the faculties.

Sollier² classifies according to the attention as follows :

1. Absolute idiocy. Complete absence and impossibility of attention.

2. Simple idiocy. Attention feeble and difficult.

3. Imbecility. Instability of attention.

The bases upon which the foregoing classifications have been made differ widely. The appropriateness of each depends upon the use to be made of it. Thus, one is for the physician, another for the psychologist, while a third is for the educator.

(Continued in June Number.)

NOTE.—It was the original intention of the JOURNAL to republish only that portion of Mr. Johnson's article that dealt with his investigations in the Psychology proper of the feeble-minded, because the history of their treatment and their classification have already been published so frequently, but the article, as a whole, brings together in convenient form so much information that people outside of the profession are seeking, that it seemed wise to reprint it all in successive issues.

¹"L'Idiotie." Paris, 1893.

²"Psychologie de l'Idiot et l'Imbecile," Paris, 1891.

JOURNAL OF PSYCHO-ASTHENICS.

Entered at the Postoffice at Faribault, Rice Co., Minn., as second class matter.

VOL. I.

MARCH, 1897.

NO. 3.

TRAINING SCHOOLS FOR ATTENDANTS.

The article of Dr. Julia Howe in this number will be of interest to all who are considering the subject of better training for their attendants. Doubtless all superintendents have felt the necessity of some system by which better work could be assured, and something introduced into the service that would raise it above mere perfunction, that had to be endured only as a source of bread and butter till permanent business for the men and matrimony for the women should intervene.

It is not to be inferred that this service is generally poor, but it is true, especially in the West, that it does not naturally attract the best material. Many most estimable people are employed in this capacity in the various institutions, but owing to the restrictions of wages and the supply of available material, there are those employed who are illy fitted by previous education or experience to have the care of a class of children, and these are always a source of anxiety to the conscientious official. They must be carefully and continuously supervised, and their training must largely be from object lessons in their own experience, viz: —lessons from mistakes and failures—a series of experiments on valuable material. This fact tends to the development of a system of set rules, a code of “shalls” and “shall nots,” in which the principles involved and the benevolent motives of the administration are very apt to be largely lost sight of by the employes, rather from a lack of comprehension of them than a disposition to willfully ignore them.

Properly organized training schools would serve to:

1. Develop a better appreciation of the breadth and nature of the work, its scientific, pedagogical and benevolent characteristics, and hence increased interest in the children and their improvement individually.

2. Afford a means for more liberal education to the attendants themselves, and also fit them to enter the profession of general nursing if the present field is not broad enough.

3. Attract to the service by this means, and the graduated salary that would naturally follow, still better material.

The lecture room affords the opportunity for arousing interest in scientific matters and cultivating a proper *Esprit de Corps*, in addition to imparting bare didactic instruction. A system of examinations followed by markings, judiciously combining lecture room work and daily practice, stimulates a healthy rivalry that soon distinguishes the worthy from the unworthy.

A system of this kind, of course, will apply with special advantage to the women, and they are largely in the majority in this branch of the service. It is not so easy to hold out inducements for a similar professional career to the men. Yet the increased efficiency of their work during their comparatively short period of employment alone would justify the extra work expended upon the course.

Work for the feeble-minded is much more complicated than that for others under public care, as it requires combined medical and pedagogical methods to a large degree, and this necessitates in addition to the administrative, both medical and teaching corps. This very complexity emphasizes the necessity for special training, brings together more teaching ability, and develops more interest and stimulus to effective study.

The training school for attendants will doubtless ere long be a recognized feature of each School for Feeble-Minded, and gradually there will develop that still better blending of the methods of the school room proper and the home life of the children which all desire.

Dr. G. E. Shuttleworth has been nominated with others upon a committee of English gentlemen and ladies to report upon the education of children of defective intellect.

We are glad to announce that Dr. Fernald is preparing a complete bibliography of our literature, which will soon appear in the JOURNAL, and by courtesy of Dr. Fletcher, of the *Index Medicus*, we have made arrangements to publish the new bibliography periodically thereafter.

NOTES AND ABSTRACTS.

KLEPTOMANIA IN CHILD OF FOUR YEARS.

Bot, in the Moscow Journal, "Kindermedizin," reports an interesting case of kleptomania in a four year-old child. She was brought by her mother to the Wladimir-Kinderhospital. She was well developed for her age. Measles was reported at one year. The parents were middle aged people and there was no nervous taint or mental aberration in them. The father was not an alcoholic, though occasionally he took a glass in company. The mother was a seamstress and busied herself with house work. She had given birth to four children, two of whom were dead, one dying from pneumonia and the other from dysentery. A boy of five and one-half years and this girl remained. The girl was well developed but appeared languid, apathetic and silent. At ten months she began to steal, hiding what was taken. She first took the rubber nipples that had belonged to her dead brother. These she concealed and then, later, threw them into the drain. The mother ascribed this to jealousy and was indulgent. Soon the child began to steal articles of all kinds. This could not be ascribed to jealousy. She took rings, ribbons, needles, etc., and threw them all into the drain. She was watched, but noting this, she became very sly, hid the stolen goods, and then threw them into the drain the next day. When she was planning a theft it was noticed that she was melancholy, languid and apathetic, but as soon as she had accomplished her purpose she became lively and gay. Thus her mother knew when she had committed a theft.

No admonition or punishment had been of any avail. When tied in her chair for a whole day she showed no sign of penitence, bore the punishment in silence without crying, and evidently without understanding her fault. Once she was subjected to a rather severe treatment; she was hung above the opening of the drain by a cord about her waist. This produced no result.

This in brief was what was learned of the child. The mother was in despair and asked for medical aid. She was asked to leave the child in the hospital, but was unwilling to do so. In order to keep the child under observation, some medicine was given, and the mother was told to return with the child in two weeks. Much to the grief of the mother, there has been no improvement in the child's condition.

TRANSLATED FOR THE JOURNAL.



N. L.—(Aged about 1½ years.) Two years before the operation.

Entered for the JOURNAL OF PSYCHO-ASTHENICS.



N. L.—(Aged 7 years, 10 months.) Two years after the operation.

Entered for the JOURNAL OF PSYCHO-ASTHENICS.



R. J.—(Aged 7 years.) One year before the operation.

Engraved for the JOURNAL OF PSYCHO-ASTHENIOS.



R. J.—(Aged 9 years, 10 months.) Eighteen months after the operation.

Engraved for the JOURNAL OF PSYCHO-ASTHENIOS.

Journal of Psycho-Asthenics.

VOL. I.

JUNE, 1897.

NO. 4.

ORIGINAL ARTICLES.

CRANIECTOMY, WITH THE AFTER-HISTORY OF TWO CASES.*

By T. Telford-Smith, M. A., M. D., Medical Superintendent, Royal
Albert Asylum, Lancaster.

(*With Plates*).

When Lannelongue published † his accounts of his first cases of craniectomy for microcephalus, the hope was raised that microcephalic idiocy would prove a curable form of mental deficiency, and would come to be classed among the ordinary surgical diseases of children, as being mainly a bony deformity to be remedied by the use of the knife and the saw; and though Lannelongue himself did not follow Virchow's teaching and regard premature ossification of the cranial sutures as the primary cause of microcephalus, but attributed it to its actual cause, namely, arrested development of the brain, still he considered that there was undue compression and consequent dwarfing due to bony pressure, and that craniectomy would relieve this and lead to increase of brain growth.

It seems, however, from later examinations of both microcephalic skulls and of the brains that they contained, that the idea of pressure being exerted and acting as a dwarfing cause must be abandoned.‡

*After-history revised to date for the Journal of Psycho-Asthenics from report made to British Medical Association, London, 1895, and published in "The Journal of Mental Science," January, 1896.

†"Congrès Français de Chirurgie," 1891, p. 80.

‡"The Journal of Anatomy and Physiology," Jan. 1895, p. 304. "The Microcephalic or Idiot Skull, and the Macrocephalic or Hydrocephalic Skull," by Sir George Humphry. See also "The Scientific Transactions of the Royal Dublin Society," Vol. V, (Series 2): "The Brain of the Microcephalic Idiot," by D. J. Cunningham, M. D., F. R. S., and T. Telford-Smith, M. D.

Sir Geo. Humphry writes as follows in a paper published by him in "The Journal of Anatomy and Physiology" after an examination of 19 microcephalic skulls:

"There is nothing in the specimens to suggest that the deficiency in the development of the skull was the leading feature in the deformity, and that the smallness of the bony cerebral envelope exerted a compressing or dwarfing influence on the brain, or anything to give encouragement to the practice lately adopted in some instances of removal of a part of the bony case, with the idea of affording more space and freedom for the growth of the brain. In these, as in other instances of man and the lower animals, the brain-growth is the determining factor, and the skull grows upon and accommodates itself to the brain, whether the latter be large or small. This view is corroborated by the fact that, in the brains taken from several of the microcephalic skulls, the convolutions of the brain give no indication of compression, but are free, outstanding, and separated by well-marked sulci."

And Professor Cunningham, of Trinity College, Dublin, after an exhaustive examination of two microcephalic brains, writes as follows: "The view that the arrest in brain-development was due to a growth restriction, brought about by a failure on the part of the cranial cavity to expand to the required extent, is untenable, because it is now known that the early closure of the cranial sutures is by no means a distinguishing feature of the microcephalic skull. It is evident, from the condition of the two brains, that the arrest in growth has taken place at a period corresponding to the third or fourth month of foetal development, or, in other words, at a time when sutural closure is altogether out of the question, seeing that at this stage the ossification of the cranial bones has only advanced to a very small extent. It is not going too far to say that all anatomists of the present day who have studied the question have abandoned this view, and the tendency now is to consider cranial growth as being subsidiary to, and dependent upon, brain growth. Still, old theories die hard, and when they are proved to be erroneous it is well, for a time at least, to reiterate the evidence against them. This is all the more necessary in the present case, seeing that in recent years operative procedure has

not only been proposed, but in several cases carried out with a view of relieving the supposed cranial restraint upon the growth of the microcephalic brain. We have no hesitation in saying that it would be quite as rational a proceeding to operate on the head of an ape in the hope of producing an access of brain-growth as upon the head of a typical case of microcephaly."

Another point which must not be forgotten is, that on post-mortem examination of cases of microcephaly in which craniectomy was performed, there is strong evidence that the after effects are rather an increase of pressure and diminution of the skull capacity than otherwise. Bourneville says: "There is a narrowing of the brain's interior by thick fibrous bands encroaching upon it," as a result of the operation.

Still the otherwise hopeless outlook as regards mental development in the case of the microcephalic idiot, even under the most favorable circumstances, doubtless rendered the operation of craniectomy justifiable as an experiment, and if it could be satisfactorily established that any hopeful mental improvement took place in the cases operated on, after even a considerable period of observation and training, the operation would have established its right to be recognized as a necessary one. Lannelongue regarded systematic training and education of the child as essential in the further treatment of the case after operation, so that to judge of the success of the surgical procedure it is only fair to wait a considerable time after the actual operation, and to observe the child continuously under suitable educational treatment. I fear that the glowing accounts given as to the results of the first cases were mainly due, as Bourneville remarks,* "to all those about the child, surgeons, students, nurses and attendants, being so interested in the child, and looking for more improvement than they did before;" when we wish for and expect a certain improvement we are very liable to imagine we see it. The two cases whose after-history I give have had these conditions as to systematic training and education fulfilled, so that they have had all the circumstances favorable to a successful and hopeful result, and for that reason

* "Recherches cliniques et Therapeutiques sur l'Epilepsie, l'Hysterie, l'Idiotie et l'Hydrocephalie," par Bourneville, Paris, 1894.

they seem fair cases from which to form an estimate as to the advisability of the operation.

I.—Both patients are boys. The first, N. L., has been under observation for four years, and under daily systematic training and education in the Royal Albert Asylum since May, 1894. N. L. (now 8 years of age) was born September, 1887, of healthy parents; he is the fifth-born child, the four older children being quite normal, mentally and physically. The mother attributes the boy's condition to the fact that she had rheumatic fever during her pregnancy with him. The child was strong and active, but there was difficulty in feeding him even from his birth. His mental deficiency became more noticeable at the time he should have commenced to talk. He never has articulated more than a few simple words—ta-ta, pa-pa, bye-bye, etc. He is said to have had a kind of fit lasting five minutes when two weeks old; none since.

At the age of 3 years and 5 months, just before the operation of craniectomy was performed on him, he is thus described:

He is strong and well-developed for his age; is extremely restless, and cannot be kept still. Constantly puts his hands to his head, and cries out as if in pain there. Knocks and slaps his head with his hand. His expression is vacant. He has to be fed; will not use a spoon. Deglutition very imperfect. Slavers. Habits very faulty; frequently wet and dirty. He is a well-marked case of microcephalic idiocy. Circumference of head, $17\frac{1}{2}$ inches.

In February, 1891, the boy was first operated on by Professor Victor Horsley. At the 59th annual meeting of the British Medical Association, held in Bournemouth, Prof. Horsley read a paper on "Craniectomy in Microcephaly,"* and gave an account of this boy's case up to the date of the paper, July, 1891, or five months after operation. The boy at the time of the operation was 3 years and 5 months old. A linear canoe-shaped piece of the skull, measuring about four inches long by half an inch broad, was removed, slightly to the left of the middle line, and extending back-

* "The British Medical Journal," Sept, 12th, 1891, p. 579, "On Craniectomy in Microcephaly, with an account of two cases in which the operation was performed," by Victor Horsley, B. S., F. R. C. S., F. R. S.

wards from the frontal eminence. The boy recovered rapidly and completely from the operation.

I saw the boy for the first time two months after the operation; parents say he is quieter on the whole; does not knock his head about so much, and does not cry out as if in pain.

Seen again six months after operation; somewhat less restless. Does not knock his head, nor seem to suffer from pain in the head. Some days fretful all day, and other days full of mischief. Slightly cleaner in habits.

Seen June, 1892, sixteen months after the operation. Parents think he shows some improvement in intelligence, but not more than they would have anticipated apart from the operation. Still very restless. Speech as before. Has grown a good deal.

Second Operation, Sept., 1893.—A separate longitudinal piece of bone removed close to first strip.

Third Operation.—About a week later a transverse strip removed from one side of longitudinal strip.

Fourth Operation.—About three weeks later a second transverse strip removed on opposite side of longitudinal strip.

Fifth Operation.—About a week later another piece removed, lengthening the longitudinal strip posteriorly.

The boy recovered from each of the operations rapidly, and without any bad symptoms.

In May, 1894, he was admitted to the Royal Albert Asylum, Lancaster. At the time of his admission the only improvement that I could detect in his condition was that he had given over the violent knocking of his head, and the crying out as if in pain. He was nearly as restless as at first, and there was no change in his power of speech.

He has now been in the Royal Albert Asylum for about fourteen months, and during that time has undergone the constant and systematic training of the institution. He has been in the charge, with a few other little boys, of a bright and intelligent nurse, who has done all she can to improve his habits and develop his intelligence. He has attended school daily, and while there received the attention of the staff of female teachers, and has been taught to sit in class with other children, and to give some degree

of attention to what is going on in the way of musical drill and various kindergarten exercises. As a result he is now considerably less restless, and is more obedient. He seems to understand better what is said to him. His habits are somewhat improved,

	Head Measurements, N. L.				
	1891.	1892.	1894.	1895.	1897.
Circumference	17¼	17⅝	17⅝	17⅝	18
Transverse <i>a</i> ,	10½	10½	10⅝	10⅝	10¾
<i>b</i> ,	4⅝	4⅝	4⅝	4⅝	4⅝
Longitudinal <i>c</i> ,	10¼	10½	10⅝	10⅝	10⅝
<i>d</i> ,	6	6⅞	6⅝	6¼	6¼

Circumference taken above ears and over Occipital Tuberosity.

Transverse *a*. Tape measure from ear to ear over Vertex.

b. Calliper measure from ear to ear over Vertex.

Longitudinal *c*. Tape measure from Nasal Notch to Occipital Tuberosity.

d. Calliper measure from Nasal Notch to Occipital Tuberosity.

Shape of Head, Dolichocephalic.

Cephalic Index, 74.5.

Measurements, N. L.			
Date.	Age.	Height, Inches.	Weight, Lbs.
1894.	6½	45½	47
1895.	8	48	49
1897.	9½	49½	56

although he is still wet and dirty frequently. He makes a fair attempt to use a spoon in feeding himself, when carefully watched. He does not knock his head, nor cry out. On the other hand, there is no improvement in his speech; his vocabulary has not in-

creased, and he still slavers, and he is, as far as I can see, a restless and, I fear, a hopeless case of idiocy. The only part of the improvement that seems attributable to the operation is the cessation of head-knocking; the other improvements mentioned would, I think, have taken place under training, even if the skull had not been operated on. The boy has grown well, and continues to be physically strong and well-developed, with the full and active use of all his limbs.

II.—The second case, R. J., was admitted to the Royal Albert Asylum May, 1893, at the age of $7\frac{1}{2}$ years. He is the first born and only child. The parents are apparently healthy and normal, physically and mentally. There is, however, a history of phthisis on both the father's and mother's side. An uncle of the father and a sister of the mother died of phthisis. There is no history of consanguineous marriage in the family. The father was aged 26 and the mother aged 27 at the time of the boy's birth. The mother says she was in poor health during the whole period of her pregnancy. The labour was severe and prolonged; instruments had to be used, and the child was cut about the head and was asphyxiated when born. He is said to have had a fall at six months on the left side of his head and to have been unconscious for about an hour after. He has never had any kind of fit. Begun to attempt to walk at about three years.

The boy is a profound case of idiocy. Cannot articulate. Slavers a great deal. Faulty in habits. Cannot feed himself. No power of attention. Is fairly developed for his age, but is not active. He walks badly, with a shuffling gait, and his grasp is feeble. Palate about normal in height and shape. Reflexes well marked. Although the boy is not markedly microcephalic (his head measuring $18\frac{1}{2}$ inches in circumference), the father seemed anxious to try the effect of craniectomy, and in January, 1894, the boy was operated on at Newcastle-on-Tyne, by Mr. Rutherford Morison, F. R. C. S.

Three discs of bone in longitudinal direction on left side of middle line removed with trephine, and the openings then united by cutting the intervening bridges of bone away with a Hey's saw.

The whole strip of bone thus removed was about five inches

long by $\frac{7}{8}$ inch wide. The skull was nearly double the normal thickness, and extremely hard and dense.

The patient recovered rapidly without a bad symptom. Five months after the operation he returned to the Royal Albert Asylum. There was no apparent change in his mental condition. It is now 18 months since the operation, and during the latter 13 months of the time the boy has been under educational and general training in the Asylum, in the constant charge, with others, of a careful nurse, and at intervals during the day he has come under the teaching of the school mistresses.

Head Measurements, R. J.			
	1893.	1895.	1897.
Circumference	18 $\frac{3}{4}$	18 $\frac{7}{8}$	19 $\frac{1}{4}$
Transverse <i>a.</i>	11 $\frac{1}{2}$	11 $\frac{1}{2}$	11 $\frac{3}{4}$
<i>b.</i>	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{5}{8}$
Longitudinal <i>c.</i>	11 $\frac{1}{4}$	11 $\frac{1}{4}$	11 $\frac{1}{4}$
<i>d.</i>	7 $\frac{3}{4}$	7 $\frac{3}{4}$	7 $\frac{3}{4}$

Circumference taken above ears and over Occipital Tuberosity.

Transverse *a.* Tape measure from ear to ear over Vertex.

b. Calliper measure from ear to ear over Vertex.

Longitudinal *c.* Tape measure from Nasal Notch to Occipital Tuberosity.

d. Calliper measure from Nasal Notch to Occipital Tuberosity.

Shape of Head, Brachycephalic.

Cephalic Index, 79.3.

July, 1895—Height, 51 inches. Weight, 64 lbs.

April, 1897—Height, 52 $\frac{3}{4}$ inches. Weight, 75 lbs.

I cannot say that there is any improvement in either his mental or physical condition. He is still a profound idiot, without speech, and requiring everything to be done for him. He slavers as before, and his habits are still very faulty. He still walks badly, and has little skilled movement in his hands. His attention cannot be fixed.

The space left in the skull after the removal of the bone seems,

as far as can be judged by pressure with the fingers, to be filling in and becoming hard.

The operation of craniectomy for microcephalus and idiocy has now been on its trial since 1890, and taking the cases operated on in France, in America and in this country, there are about 200 cases from which it ought to be possible to form some judgment as to the success of the operation, in so far as mental development is concerned.

The information which up to the present has been published as to the after-history of the majority of these cases is meagre in the extreme. We find in some cases "amelioration" or "improvement" reported, but particulars as to the kind and degree of improvement are not stated. Also in the published cases the space of time between the operation and the report is generally too short to admit of a well-founded opinion as to the results really due to craniectomy.

It seems time, however, to urge upon all who have had an opportunity of observing the after-results of the operation, in any cases where a sufficient time has elapsed, to publish a full and impartial account of the present condition of the patients, and to contrast it with the condition before the operation.

The weight of evidence so far is, I think, against the operation of craniectomy, as judged not only from the facts learned from an examination of microcephalic brains, microcephalic skulls, and of skulls in which the operation has been performed, but also as judged from the actual mental and physical results obtained in even those cases where all the circumstances were favorable.

The boy, N. L., may, I think, be taken as a fair test case as to the merits of the operation in microcephaly. He was in every way a favorable case to commence with, healthy and well-developed, with apparently nothing except the microcephaly to account for his mental deficiency. He has certainly had an ample amount of the bony brain-case removed in the five operations he has undergone; and since operation he has had every advantage and opportunity as regards special training and education. Yet I fail to see that anything further can be attributed to the operations than the cessation of head-knocking, and though this is a distinct

improvement in the boy's condition, yet it hardly seems an adequate result for the risk run. As to mental development, I see very little, and what there is would, I think, have most likely been attained by educational methods alone.

The second patient, R. J., although hardly falling into the class of microcephalic idiots, was a good test case as to the advisability of the operation in congenital idiocy. In this boy it seems impossible to see any mental improvement or sign of brain development, and I think in a similar case the operation would now rightly be considered unjustifiable.

Further note, April, 1897:

N. L.—This boy is rather quieter and less restless than he was, he also sleeps better at night—he used to get up frequently and wander about. He continues quite free from head-knocking. He can use a spoon when watched. His habits are somewhat cleaner. His vocabulary has increased by a few words, and the articulation is clearer. He now says "Lizzie," "Shan't," "No," "I Won't," "Annie," "Ta-Ta." He still slavers, but not quite so much. His physical health is still excellent. The improvement noted is, I think, almost entirely due to systematic training and supervision.

R. J.—The condition of this boy is unchanged in any way, either mentally or physically. He is still a profound, and apparently unimprovable, case of idiocy. The circumference of the head has increased $\frac{3}{8}$ in. in two years.



OBSERVATIONS ON THE TREATMENT OF EPILEPSY.

A. M. WILLIAMSON, M. D., New London, Conn.

Although the chief purpose of this article is to give an account of the mode of treatment which during many years' experience, I have found most successful in epilepsy, I will preface it by a brief description of the leading features of the disease.

Epilepsy, proper, is a functional disease of the nervous centres, in which complete temporary loss of consciousness is a distinguishing feature.

This affection is not the result of organic disease, but of some functional disturbance the exact nature of which the most thorough investigation has hitherto failed to determine.

The severe forms of this disease are characterized by spasms which may be continuous or intermittent.

In many instances these attacks are preceded by a warning; in my experience this occurs in about one-third of the whole number of cases.

These warnings are variable in their character and may precede the attack several hours or only by a few seconds.

The sensations experienced by the patient are manifold. One group of warnings is confined to one side of the body; another is referred to the viscera; nausea, choking, dyspnoea or peculiar sensations about the heart. Sometimes a rushing feeling precedes the spasm; sometimes a twisting of a limb or the head to one side; sometimes a twitching of some part of the body, or a tingling as from the pricking of pins and needles.

Frequently there are variations in sight, hearing, taste and smell. Different colored lights flash before the eyes or unusual sounds are heard in the ears.

Changes of disposition are noticed—irritability—moroseness.

The severe attacks are sometimes preceded by a cry, a peculiar sound, hardly imitable by the human voice. In other cases the onset is accompanied by a sound of choking and strangling, most painful to listen to. In the majority of the cases, however, loss of consciousness occurs without any premonitory symptoms being noticed. The patient suddenly falls with pale face and dilated

pupils. Muscular contraction immediately follows, and the eyes become fixed and staring. The face darkens—the veins are distended. So great is the congestion that rupture of a blood-vessel in the brain sometimes occurs, followed by death with the symptoms of apoplexy. After a few seconds, though seeming much longer to the observer, the continuous spasm is broken and the intermittent ones succeed. The muscles rapidly contract and relax; the tongue is often bitten; in rare instances bones are fractured; the patient froths at the mouth and involuntary evacuation of the bowels and bladder frequently occurs. The remissions increase in length until the spasm ceases.

Upon recovering consciousness, the patient in some instances, rises and moves about much the same as before the attack; in other cases, confusion, stupor and even delirium follow. The desire to sleep after an attack is, however, almost universal.

In those cases in which the attack is preceded by a warning, effectual measures may sometimes be taken to ward off the spasm. A sudden shock; the inhalation of ammonia or nitrate of amyl; placing the feet in hot water or arresting the circulation in a limb, will occasionally prove effective.

Minor attacks of epilepsy vary much in character. They may be so slight that their epileptic nature may be overlooked. In the most common form, there is a transient loss of consciousness with or without muscular relaxation and always without muscular contraction. The patient suddenly stops, drops whatever he may be holding, and, if standing, sometimes falls—but there is no real spasm and no noticeable after effects—the patient may even continue a sentence or action begun before its occurrence.

Sudden starts or jerks *without* loss of consciousness cannot be ranked as epileptic seizures.

A condition called *automatism* sometimes follows both the mild and severe seizures. The patient though apparently conscious does things of which he has no after recollection. He is really unconscious—he attempts impossibilities—sometimes exhibits rage and violence—may even take life.

Regarding the frequency of the attacks there is the widest

variation. There may be no more than one, two or three in a year; there may be twenty in a day.

Frequently the disease commences with the slight seizures, no severe ones occurring for months. Again, there may be a series of spasms followed by a long interval; and, as a rule, it may be observed that the severer the convulsions the less frequently they occur. In any case it is to be expected that the attacks will increase in frequency as time goes on.

In many cases the seizures occur at stated intervals during the twenty-four hours, notably in the early morning hours or soon after retiring in the evening.

Regarding the *pathology* of this disease, little of positive value has been discovered. When death occurs during an epileptic seizure, the post-mortem shows no change in any part of the body sufficient to account for the disease. It would seem that the nervous system is in an abnormally irritable state, in which the slightest functional disturbance precipitates a nervous spasm.

Putting aside those cases in which the disease comes by inheritance, which, in my experience, cover about twenty per cent. of the whole number, we find upon careful inquiry that the relatives of the patient are seldom able to advance any reason adequate to account for the first seizure.

Whether inherited or acquired a predisposition undoubtedly exists in these cases; and the same exciting cause will not produce the same result in cases where that predisposition does not exist.

When an infant has a convulsion from whatever cause, it should be taken for granted at once that this predisposition exists; and treatment should be entered upon directly; *not treatment by dosing*, but careful and constant attention, to the end that every possible *exciting cause* may be warded off.

Exciting causes in young children are numerous. Fright, worms, teething rarely, the eruptive fevers, especially scarlet fever, and most frequent of all in my judgment *digestive derangement*.

In adult cases, tobacco, self abuse, blows and falls on the head, and prolonged mental anxiety, all rank high as exciting causes.

But my experience has taught me that the one exciting cause above all others, both in the young and the old, is *abuse of the digestive organs*.

Given a nervous system of not quite normal resisting power, what more probable cause of convulsions than a stomach overloaded with indigestible food, or an intestine distended with impacted feces? In *no case* can good health exist where such a condition of the digestive organs prevails, and where there is a *pre-disposition* to convulsions they will surely follow. As a rule children are over-fed. Often, fortunately, nature intervenes and vomiting relieves the distended stomach. Constipation is sometimes overlooked for mothers are occasionally thoughtless and nurses careless.

All who have to do with epileptics know how frequently the attacks accompany or follow a disordered stomach.

What is the *prognosis* in this disease?

Every one recognizes the fact that this disease, though not commonly fatal to life, is, if not cured, most certainly fatal to all hopes of future happiness or success.

Is there any probability of the attacks ceasing without treatment?

The *tendency* of the disease is to perpetuate itself; each attack increases the liability to another by rendering the nervous system less stable. Many have thought that attacks commencing in childhood might cease at puberty. I have never known such an instance. Marriage makes no difference, although in married women the attacks usually cease during pregnancy to recur again after parturition.

Certain conditions are more favorable to recovery than others. They are more favorable if the patient is a female and if the attacks did not commence until adult age.

The shorter the duration of the disease and the longer the interval between the attacks, the greater the chance of recovery. The outlook is also much brighter if there is no considerable mental change. These points have a certain weight and value regardless of special treatment. Of course, in all cases, the prognosis greatly depends upon whether there is or is not any *inherited taint*.

In the *treatment* of epilepsy, the *exciting cause* is of little consequence unless that cause is still acting.

Circumcision, for instance, has been successfully resorted to, but is of use *only* when the parts are abnormally formed, causing pain and inflammation.

What, then, is the best course to pursue and what is the prospect of success when no removable cause exists?

We know that, since the disease depends upon such a condition of the nerve centres as cannot be recognized by any means within our knowledge, we must treat symptoms—the chief of which is the convulsion. This makes it plain that the physician's chief skill in these cases must come from *experience*—the *constant observation* of a large number of cases—a close study of constitutions and the effect of remedies.

Most sufferers from epilepsy have been able from time to time to obtain temporary relief from the attacks; a recurrence, however, occurring sooner or later. *Is this recurrence preventable?*

If the attacks can be successfully warded off for months and the patient kept in apparently perfect health, are we not justified in the inference, that, by a proper course of treatment, the period of immunity may be indefinitely prolonged? If a patient can be kept well for from six to twelve months, is it unreasonable to infer that a relapse is the fault *either of the patient or the physician?*

Now if this relapse is due to preventable causes, what are they?

There are three directions in which we may look for reasons of failure of treatment.

1st. To the patient's constitutional peculiarities, power of tolerating medicines, etc., lack of knowledge of which will surely lead to mistakes in treatment.

2d. To the condition of the digestive system; especially whether it is given more to do than it is capable of doing easily.

3d. To the question of personal habits, occupation, exercise and personal discipline.

It is simply groping in the dark to attempt to treat a case of epilepsy until fully posted on all these points. For instance, a dose of medicine which will profoundly affect one person will have little or no effect upon another. In this disease, it is all impor-

tant that the *right dose* should be administered—too little or too much will be worse than useless.

I have already spoken of the importance of caring for the digestive functions. No case of epilepsy can be cured if the stomach and bowels are overtasked. A very trifling derangement will destroy the physical balance and bring on an attack. An epileptic is always, so to speak, balancing on the verge, ready to topple over into a convulsion at the slightest provocation.

There are four rules in connection with the digestion, to which I enforce *strict adherence*:

- 1st. *Eat slowly and moderately.*
- 2d. *Avoid everything indigestible.*
- 3d. *Eat nothing between meals.*
- 4th. *Ensure a free movement of the bowels daily.*

An abnormal appetite is common with epileptics. Food sufficient for health and strength should be given, but none merely to gratify the appetite or fancy.

Such patients as I take into my own house during treatment, eat at my table and are furnished with the ordinary variety of plain, substantial food. No veal or pork is admitted—no coarse vegetables, no pies, cake or fresh baked bread. My rule with patients is to avoid everything that can *possibly* disturb the perfect working of the entire system.

As regards exercise, the physician's judgment must be the guide. As a rule, liberal exercise, carried even to the point of fatigue, is advantageous. In a long experience I have never seen a convulsion brought on by fatigue.

Sluggish, inactive patients, with poor circulation and cold extremities, never thrive. Those who are active, erect, quick in their movements, fond of out-door exercise, are the ones who respond most readily to treatment and are the least affected by the depressing effects of the remedies. A patient with pallid face, round shoulders, shuffling gait and a disposition to lie around the house, has little chance for recovery.

Constant occupation of some sort, keeps the mind occupied—a great point in this disease—stimulates the circulation, and imparts a healthy tone to the whole system.

Another point worthy of notice, as helping to ensure success in treatment, is personal discipline. Epileptics are apt to be self-willed, obstinate, easily angered, and regardless of consequences; and stand in especial need of the controlling influence of a strong mind and a firm hand.

Parents, through sympathy, are apt to be over-indulgent. The child soon comes to think that every wish must be gratified, and to rebel if it is not. Such a child should be treated with unvarying kindness, but absolute firmness; and never suffered to contest a reasonable requirement. As in most cases the memory, judgment and reasoning powers are more or less impaired, he yields more readily to passion or temptation, and has a lessened appreciation of his fault.

The rather exceptional success I have had with cases received into my house during treatment, has been due chiefly to the close and unremitting attention I have given them on the lines laid down above; combined, of course, with appropriate medication. The most skillful physician, who sees such cases in office practice, cannot do them or himself justice. This accounts, to a great extent, for the large percentage of failures to give more than temporary relief, and for the generally expressed belief that the disease is incurable.*

The peculiarities of the disease render it almost or quite impossible for the patient to be treated successfully at home. Every day points arise as to diet, exercise, or indulgences, which call for the judgment and decision of the physician.

Dr. Gowers, physician to the London Hospital for Epileptics, well says:

"The greatest advantage to the patient results from a complete change of moral atmosphere, by removal from home influences, which are often unfavorable by reason of petty annoyances, over indulgences, or the unwise solicitude of friends, which fosters instead of controlling the disease. Such a change, if the patient is placed in experienced hands, increases the prospect of cure at least one hundred per cent."

*A full history of several successful cases was given in a paper read by me before the American Medical Association.

Under such intelligent supervision, every exciting cause of attack is foreseen and warded off, and the nervous system is kept under control by the administration of the most effective remedy for the individual case. Thus, in time, the epileptic *habit* becomes broken, for the convulsions of true epilepsy may justly be called a habit. Where a predisposition exists, either hereditary or acquired, the first convulsion, however caused, paves the way for a second; and the nervous system soon acquires a *facility* for such nervous explosions, so that slighter and slighter causes suffice to produce them.

The different remedies used in this disease require no lengthened description. Since the introduction of the bromides, they have, with the majority of the profession almost entirely superseded all other remedies. Not only the prescriptions of the regular profession, but all the advertised nostrums in the country depend upon the bromides for whatever virtue they possess. The remedy deserves its reputation, but it has been used with a great lack of knowledge and discrimination.

There are many persons who are utterly unable to tolerate this remedy in any form. Many instances have come to my knowledge in which acute attacks of mania have resulted from its injudicious use.

But where it is well borne by the system it is undoubtedly the best remedy we have. It must be carefully handled—the system studied and adjusted to the proper dose. Over-dosing causes the patient to become dull and lethargic, with cold extremities and feeble pulse. Often a semi-imbecile condition is reached, with drawling speech and dribbling mouth.

A disagreeable eruption, *acne*, often occurs. It is pustular in character—a red swelling, with a small point of suppuration. Small doses of Fowler's Solution will do much to prevent this.

Combination with other remedies often renders the bromides more acceptable to the stomach, and seems to increase their beneficial effect.

Digitalis, Belladonna, Valerian, and Iron have been so used with advantage.

The tincture of iron should never be used, on account of its irritant properties.

Zinc is a remedy of long standing, and is sometimes useful, especially where there are any symptoms of St. Vitus' Dance.

No remedy that causes digestive disturbance can be continued.

Surgical operations for the cure of epilepsy have been often resorted to, but seldom with success. Trephining the skull over the seat of a depression, or an abnormal growth, has sometimes resulted favorably, but experimental operations are unworthy of consideration.

It is interesting to note that the severer the spasms, the easier, as a rule, they are controlled. Where the two forms co-exist, the slight attacks often persist after the severe ones have entirely disappeared.

In treating a case of epilepsy, every effort should be made to counteract the tendency to mental impairment. It is my custom to devote a portion of every day to the instruction of my younger patients, taking care not to overtask them in the slightest degree. Great care should be taken, also, to prevent any association with inferiors, or with evil-minded persons.

It is a great satisfaction to know, that, in those cases in which cure is effected, the mind regains gradually, almost, if not entirely, its normal condition.



REMINISCENCES.

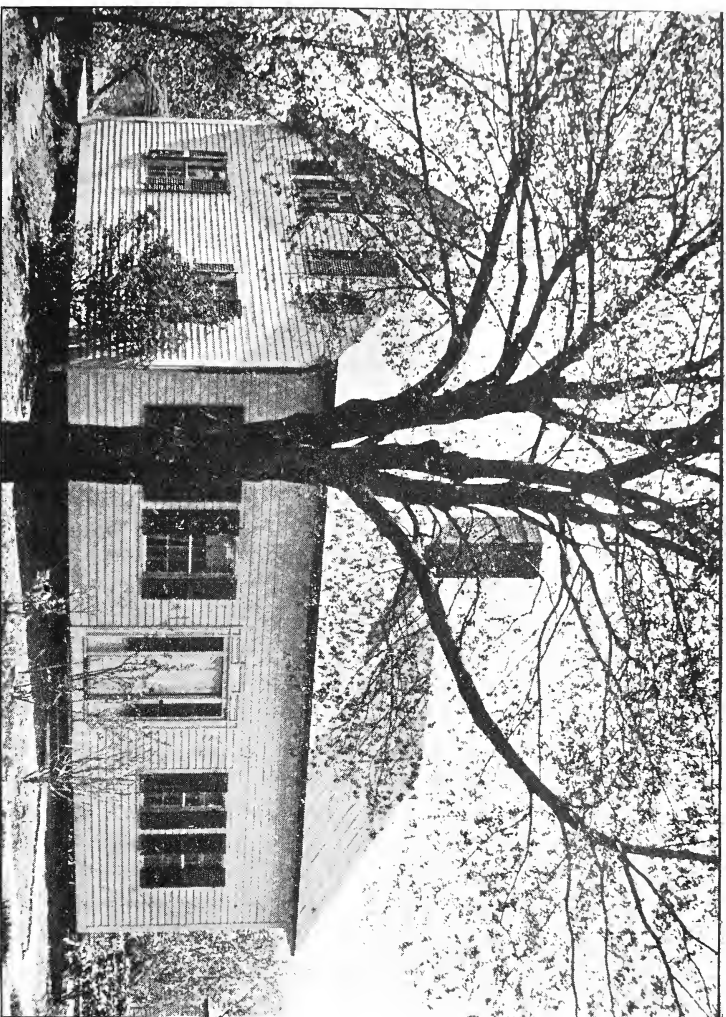
In November, 1850, I came to Barre, Massachusetts, the newly wedded wife of Dr. George Brown, a country physician.

Among the number to welcome us were Dr. and Mrs. Hervey B. Wilbur, who had chosen for their life work the teaching of idiots, and were then residing in the house designated Number Two.

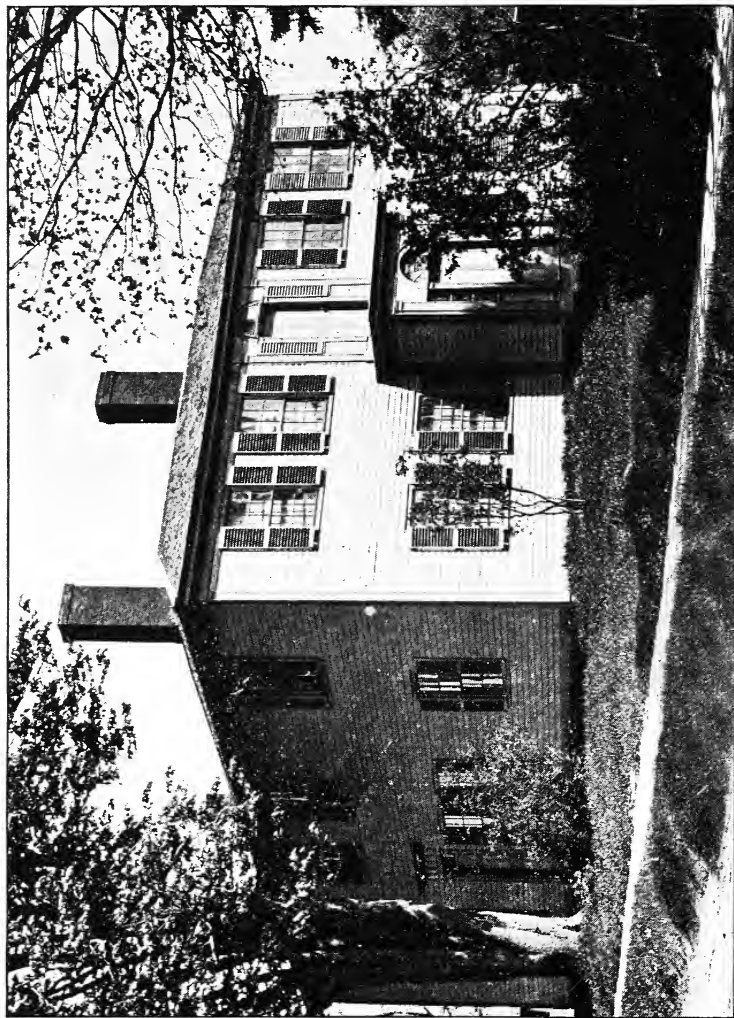
The cottage marked Number One was too small for a school, and Dr. Wilbur moved to the larger one before receiving his second pupil. Both houses stood on the same site then, as now, and are exteriorly unaltered save the loss of the quaint railing then over the porch of the front door, and removal of the school department.

The early friends of Dr. Wilbur were annoyed and chagrined that he should give up his promising position in the medical profession for labors they considered of no value pecuniarily, and positively foolish. During the winter of 1851, however, he was beginning to receive the consideration he had earned, and his small number of anomalous pupils were the lions of the day, visited by all comers to the town. The *Dictionnaire de Medecine*, published in 1837, had described idiocy as "An absence of mental and effective faculties, and as almost complete nullity of the cerebral functions;" adding "It is useless to attempt to combat *idiotism*. In order that the intellectual exercise might be established, it would be necessary to change the conformation of organs which are beyond the reach of modification." Physicians, scientists and educators were eager to investigate the process by which such an authority had been opposed on this hemisphere. I was myself very faithless and delayed following the crowd till common courtesy demanded it. But when I came and saw I had to confess myself conquered. I was intensely interested in everything. A boy with fine head and face, large beseeching eyes, clung to my hand, as if seeking my help. Dr. Wilbur assured me he was very low in the scale of ability, but I was unconvinced till I had tried for an hour with all my will power and perseverance to teach him to pick up a pin. Since that fruitless effort I have never lost my interest in the abnormal-born.

July 10th, 1851, an act passed the Legislature of New York entitled "An act to establish an asylum for idiots and making an



No. ONE.—The home of Dr. H. B. Wilbur at Barre, Mass., where in June, 1848, he welcomed into his family his first defective pupil.



No. Two.—The building in which Dr. Wilbur's later classes were taught and where he surrendered the work to Dr. and Mrs. Brown, in September, 1851,

appropriation therefor." To illustrate the almost universal lack of faith among business men in the work of teaching idiots at that period, I will quote from remarks made at the laying of the corner stone of a new edifice for the Pennsylvania Training School, at Media, Pa., in December, 1857. The Hon. J. H. Titus, of New York City, speaking of the early efforts in that state, in behalf of this defective class, said: "When Dr. Backus made his first movement in the Senate he called on me, then a member of the assembly, to be ready to support his bill when it might reach our branch of the Legislature. I said there was already too much demand for *practical* efforts in the work of relieving suffering humanity, to allow of any romantic attempts, and I must in frankness say, I considered his proposition, *to teach and train idiots* a piece of romance." Two other prominent officials, appointed with Mr. Titus on the Board of Trustees, were equally faithless and frank. One said: "Do not take it as personal, but I must say I think none but fools would think of teaching fools." The third Honorable gentleman, when told of his appointment, remarked: "This is a strange business the Legislature has set us at. I don't know what peculiar qualification it may have discovered in us for the work of teaching and training the fools of our State; nor do I think we shall do them much good or ourselves much credit." Suffice it to say both of these gentlemen were appointed a special committee to select a Superintendent. In prosecution of this special charge they started to visit Dr. Howe, of Massachusetts, and obtain his advice. On their route they stopped at Barre, in that State, to inspect the private school belonging to Dr. Wilbur. With him they spent parts of two days, and had a full opportunity of examining his pupils—of investigating his system, and of estimating his ability. Immediately on leaving, each avowed his conversion from skepticism, and his conviction that the undertaking was feasible. As both had been impressed with Dr. Wilbur's fitness for the work they returned forthwith to Albany and recommended his appointment as Superintendent. One of these gentlemen continued to act as Chairman of the Executive Committee till his death, and both were enthusiastic friends of the cause.

When Dr. Wilbur had decided to accept the proposals from

Albany he immediately came to us urging that Dr. Brown and myself should assume charge of the small class of pupils to be left in Barre. We accepted the charge after due consideration and commenced our duties September 1st, 1851. To the rear of the mansion, Number Two, which lodged these pupils, was then attached an unfinished portion of another edifice. This addition provided a large high room open to the ridge pole, serving all educational and gymnastic purposes. Three ladders were erected at one end and a rope swing dangled from the apex near by. A machine resembling a small horse power, in one corner, was very useful as a sedative treadmill for nervous boys, or an educator for imperfectly trained muscles of locomotion. Parallel bars stood by one window; a black-board and letter-board were on movable frames; outline maps, charts and pictures hung from the walls. Plain settees and a high old-fashioned desk completed the inventory of furniture. On the table were school readers side by side with color cups and balls, a globe, blocks, counters and boxes of beads, accompanied by primitive form and peg boards, designed by Dr. Wilbur and manufactured by the village carpenter. Balls, dumb-bells and bolcheers were piled together on the floor. There were many advantages in this mingling of the literary and manual, considering the limited number of officials. Here then was the workshop where we endeavored to continue the ways and methods of our predecessor, remaining eighteen months before moving to more spacious and better arranged quarters. We were teachers, supervisors and attendants by turn, with a single domestic in the kitchen. The children sat with us at table that we might seek to cultivate good habits of eating, or in the sitting room that we might direct their ways and continually prune their uncouth habits of body. Our boys were marked types of this defective class, each one an object lesson for our instructor. A young lady once remarked to me that the Feeble-Minded resembled jars with the covers off, giving to all outsiders the privilege of examining the contents *ad libitum*. Such intimate association gave us practical insight of the characteristics, needs and ways of reaching such darkened minds. When our helpless ones were safe in bed we sat down to read M. Séguin's Traitment Moral, Hygiène et Éducation Des Idiots.

CATHARINE W. BROWN.

Barre, Mass., June 11th, 1897.

SELECTED.

CONTRIBUTION TO THE PSYCHOLOGY AND PEDAGOGY
OF FEEBLE-MINDED CHILDREN.

By G. E. Johnson, Fellow in Pedagogy, Clark University.

I.

(Continued from March Number.)

THE EDUCATION OF IDIOTS.

In writing a chapter upon the training of idiots, one can do no better thing for the general reader or teacher than to review carefully Seguin's Physiological Method.

To Jacob Rodrigues Pereire, Dr. Seguin attributes the prominent place in the early development of the physiological method. Pereire taught congenital deaf mutes to speak, not only with a natural voice and a correct pronunciation, but even to reproduce his own peculiar southern accent. This was done by causing the deaf to perceive the vibration accompanying a given sound and to reproduce it. He practically made his pupils hear through the skin, and thereby demonstrated that all the senses are modifications of the sense of touch.

From Pereire's experiments resulted the following important conclusions:

"1st. That the senses, and each one in particular, can be submitted to physiological training by which their primordial capability may be indefinitely intellectualized.

"2d. That one sense may be substituted for another as a means of comprehension and intellectual culture.

"3d. That the physiological exercises of a sense corroborates the action as well as verifies the acquisitions of another.

"4th. That our most abstract ideas are comparisons and generalizations by the mind of what we have perceived through our senses.

"5th. That educating the modes of perception is to prepare pabulum for the mind proper.

"6th. That sensations are intellectual functions performed

through external apparatus, as much as reasoning, imagination, etc., through more internal organs."

Rousseau often visited the school of Pereire and, according to Dr. Seguin, the *Emile* is full of experiments upon physiological teaching, which could have originated only in the school for deaf mutes. He says: "The first school where deaf mutes were taught to speak naturally and the first treatise on education whose object was to create, not a subject, but a man, stand side by side as the two indices on the road of modern education." It was after these two that Itard conceived the terms of his second plan for the training of his savage pupil. If Itard "did not conceive a philosophical method of education, he expressed and realized the first views on this subject, generalizing on his savage idiot the sensorial experiments made by Pereire on the touch of deaf mutes; and specializing on the same forlorn pupil the theories enunciated by Rousseau for the education of mankind. Others have continued his task, even enlarged, completed and systematized it, but we do not know of any one who would not gladly exchange all subsequent titles for the authorship of the Savage of the Aveyron."

Dr. Seguin's book of 1846 had closed with these Words: "If it were possible that in endeavoring to solve the simple question of the education of idiots, we had found terms precise enough, that it were only necessary to generalize them to obtain a formula applicable to universal education, then, not only would we in our humble sphere have rendered some little service, but we would besides have prepared the elements for a method of physiological education for mankind. Nothing would remain but to write it." Twenty years afterwards Herbert Spencer alone, having advocated the application of these methods to ordinary schools and children, and no *ex-professo* having been written, Dr. Seguin takes upon himself the task of the present work.

According to the physiological method, "education is the *ensemble* of the means of developing harmoniously and effectively the moral, intellectual and physical capacities as functions." It adapts the principles of physiology, through physiological means and instruments to the development of the motor, perceptive, reflective and spontaneous functions. This method is first applied

in removing as far as possible the causes of idiocy, and when that has not been done, by noting the very first systems of idiocy in the infant and beginning its treatment immediately. Education must follow the great natural law of action and repose. Each function must be called in turn to activity and rest, the activity of one aiding the repose of another, contrast being not only an instrument of relaxation, but of comprehension also. Above all individuality must be respected. The general education embraces all that pertains to movement, prehension, manipulation, palpation, imitation and communication through language, signs, symbols. From imitation is derived drawing, from drawing writing, from writing reading. Reading implies the most extended use of the voice in speaking, music, etc. Each sense is trained to be perfect in itself, and also to take the place of another. Both sides of the body are trained alike. After the natural senses are developed as far as possible, the instruments of artificial senses are to be brought into use; by handling, the microscope, compass, prism and others must be made familiar to all children, who shall see nature through itself, not through the twenty-six letters of the alphabet.

General Directions.—The child must be well fed. Each day's work must begin like a pleasure, with walks, sports or music. The exercise requiring the greatest attention, must come at the first period of study. During the later hours more is to be derived from excitement. Each new object must be taught as a corollary to what has been previously learned. Watch for the first signs of fatigue. One of the first duties is to correct the automatic motions. Do not confine to automatic memory what can be learned by comparison; teach a thing with its natural correlations and generalizations. Use contrasts, sometimes similarity. Teach dissimilar things in apposition. Use repetition, rhythm. Alternate exercises in analysis with one in synthesis, individual with group teaching. Never do indoors what can be done without. Create gaiety and mirth,—happiness is as much an object as progress. Begin with each child where natural progress is stopped; so many children, so many beginnings.

Training of Movement.—Automatic, mechanical and spasmodic movements must be corrected. There are two kinds of immobility

—negative and positive; negative immobility, when the child has not will-power to make the desired voluntary movements; positive, when he has the will-power to check involuntary movements. After positive immobility has been acquired, the child must be taught to walk. If utterly helpless, he is held and pushed along, his legs are made to yield to the elasticity of a baby-jumper, to encounter with regularity a spring-board. The muscles are kneaded, articulations handled. The child is placed upon blocks of the size of the feet and made to stand, or the blocks are of different height and the child walks down them as down the stairs. (The education of the hands and arms is begun at this point.) Now come into use the horizontal ladder, steps, rough places, stony, slippery, and the like. Footprints are made upon the floor, near or far apart, to be followed. The child does all these things not yet from his own impulse. How the child rises from the negative or collapsed will to the synergic will is shown in the chapter on moral education. Greatest attention is paid even to the minutest details of locomotion; for steadiness of foot is the basis of steadiness of body and hand. The first want of a people and an individual is muscular strength.

The Hand.—The anomalies of the idiot's hand are universal. Too short, spindle, flabby, stiff, cold, bloodless, saliva soaked, its incapacity is the barrier to all the idiot is to acquire. The hand must first learn to take hold, keep hold, and let go. The child is put behind an inclined ladder. His hands are placed within the teacher's hands and are made to clasp a round. If he lets go he falls. Seguin's system of consequences and rewards is wonderfully ingenious and happy. For example, suppose the child's hands are hot and chafed with his first exercise of grasping the ladder. He is told to hold out his hands, and to his surprise a smooth-skinned, cool, rosy apple is placed in each. Delighted, the child makes his first voluntary attempt to grasp and hold.

After the ladder come the balancing pole, glass, pen, spade, bricks and the like. Prehension, the more physical, first; handling, the more intellectual, later. The special gymnastic apparatus includes the blackboard, the swing with spring-board, bricks, balancing pole, blocks like dominoes, pins, beads, pasteboard pat-

terns, coins, cards, thread for winding, musical mechanisms, apparatus for buttoning, lacing, etc. However, the best things are drawn from the material of common life.

Imitation.—"Imitation is the power, resulting from reflex spontaneity, of repeating after others acts which we should not or could not have done of ourselves. It furnishes a motive to the million activities which have none primarily." It is never commenced too early nor extended too far in its physiological applications. The child is taught to imitate first the full body movements, then movements of parts, as of arm, hand, leg; then of special organs, as eyes, lips, fingers, thumbs, etc. These movements, at first simply serial, soon give way to the unexpected call into action of any organ that can be moved by the will. Induced at first in silence and the isolation of closet and the monotony of circumstances, it is later carried to the open room and the contagion of groups. Now begins an endless round of movements, gestures, attitudes, slow at first, but increasing in rapidity and interest until teacher and pupil seem the circuit of a current of sympathy and perfect understanding. Not a word is spoken, but the sight has been improved, movements quickened, perception extended, understanding increased, all parts of the body brought under ready control of the will. Above all, the dead hand is educated to living work.

Education of the Senses.—We must first find the seat of difficulty, whether in the peripheral organs, the ganglia or the hemispheres. One principle must guide the training of touch as in the training of all the senses, viz., that each function is virtually identical with its faculty, *i. e.*, each function is psycho-physiological. Hence, each sense must be taught both as a function and as a faculty. For instance, the fingers must be trained not only to be quick to receive impressions from objects, but also to discriminate accurately their qualities.

After the preliminary and imitative exercises, come a new set of three kinds of experiments: One to cultivate perception, one to transmit it, and one to give knowledge of it. The peripheric termini of the nerves may be hyperæsthetic or anæsthetic, the centripetal nerves may be slow in action, or the sensorial ganglia may be deficient in sensibility. In the first instance, the termini must

be covered with stronger epithelium; in the second, rough substances must be used, the hand titillated with feathers, etc.; in the third, the balancing pole comes into play, and in the fourth, we must depend upon hygiene and medicine.

Taste and Smell.—Special “sensorial gymnastics” are devised in smelling and tasting.

Audition.—A child may be deaf through defect of auditory apparatus or lack of intelligence. The functions of the sense of hearing are hearing, auditing, listening and repelling. Sounds are noises, music or speech, which speak respectively to the wants, the motive powers and to the intellect. Music excites many impulses in idiots even when it has no special meaning to them. The music must be striking, the tunes corresponding to the natural disposition of the children, modified by temperature, atmosphere, snow, rain, etc. It serves in one case as a sedative to muscular exertions and aid to concentration of mind; in another by expressing mirth or muscular vigor, to incite desire of play and exercise. The intellectually deaf are first placed with chest against the piano when it gives forth its strongest vibrations, while the other children are singing. Then comes a profound silence, followed again by vibrations. In the isolation of a dark room, music is made to pierce the blank organ of the child. Thus far, the child has learned to hear. Auditing is developed by giving continuity to the tunes as if they were discoveries. Listening is created by breaking the continuity of the tune at its most interesting point. This leaves the ear of the child listening as though thirsting for more.

Teaching Speech.—The physiological defects of the organs of speech must be removed. Suppose a child is to receive its first lesson in articulation. He is made to resume his exercise of imitation. This is extended to movements of all parts of the face, the lips, the tongue. As the faces draw nearer and nearer, the teacher's lips suddenly become parted as if by chance with the emission of the sound of “pa” or “ma.” Inertia has broken the barrier for the child and he has used his voice. As soon as syllables can be pronounced, music is employed in the speaking exercises to carry along the voice.

The Sight.—Sight is the most intellectual of the senses and the

most connected with intellectual disorders in idiocy. It is the most difficult to train. If there is one thing which can penetrate the glassy eye of an idiot it is our own look. "The best way of fixing the regard is the regard," Seguin phrases it. The dark room is useful. Here flashes of light, fireworks, a mammoth kaleidoscope, and combinations of colors attract the vacant look. Next the balancing pole. As soon as the attention of the eye is secured, it is directed to serve an educational purpose. Colors are taught in a dark room with colored window panes and then by all sorts of colored objects. Form is taught by blocks, size by measurement of sticks, distance by actual experiments. Of forms the most difficult to acquire is the plane. Planes are made in the sand with the hand, roller, spoon, spade, etc. By imitation, the child places wafers on a circumscribed plane, making the center, corners, etc. The child models in wax, clay, or putty, squares, rounds, triangles or familiar objects. With a knife the child whittles a stick to a certain mark, then copies a form. After the knife come the chisel, hatchet, saw and hammer. Scissors are a favorite instrument. Now we can put a pencil into the hand of the pupil with confidence. He traces lines upon the blackboard, horizontal or vertical, then slanting. These lines gradually become joined into plane figures; now curves are traced, and these finally are blended into solid figures.

Letters are drawn before they are read. Two alphabets are used, one solid, the other printed. The child matches solid letters upon the printed ones. This is passive reading. Active reading begins with the use of cards, upon which are printed monosyllabic words. These are read after the manner of the word method. Objects and acts must accompany the reading lesson. There is great danger here of the abuse of object lessons. "The object lesson derives its most important advantages from its degree of idealization. In the hands of a teacher who feels nothing but matter, it is a lowering instrument."

Number work is most difficult to an idiot. Number is always taught in connection with objects.

Memory and Imagination.—At first memory is trained only through the general training of the senses. We now bring the

attention of the child to a class of facts or feelings in three circumstances—when they take place, after they are accomplished, and when they are to be presented again. What he likes to eat, what he likes best to do, and by contrast, what he dreads most, furnish pabulum for recollection. The mind is habituated to remember not for memory's sake, but for some end to be accomplished. Just as the congenitally blind have no visual images and the deaf no auditory images, so that the idiot has no images or ideas without previous perception. The rapid growth in idiots of aspirations after what is beautiful, right, and worth having, proves that idiots can acquire imagination under the physiological education. It is imagination which teaches them to try to please, seeing their faces lighted with hope and faith at their progress, or even the low idiot to share his cake with another and to look intensely not at his mouth, but at his eye, to see in it the gleam of pleasure.

Moral Education.—We have already seen how the moral is blended with the physiological training. To describe the moral training in all its parts would be writing the book over again. Its abstract principles are briefly set forth.

Severity is cruelty. There should be no punishment unless the understanding of the wrong preceded the commission. Rewards may be given. Caresses are a great power for good or for evil. The time and place of each command must be opportune. Idiots are helped by opposing the vivacious to the immobile, the imitative to the careless, the affectionate to the indifferent, etc. A child who teaches another teaches himself more by the reflex action of his will. The lineaments of the face, the attitude of the body, the expression of the eyes, the gestures, may enforce or defeat a command. The expression of the voice is of the greatest importance. Coercion is sometimes necessary and should then be used. Seguin quotes Leuret: "Physical pain serves the insane and idiots as other men as a means of education; it is one of the motives which lead us to avoid the wrong and search for the right; but it is not always necessary." Our commands at first must be those which we can make the child obey. We will not order him to open his mouth,—how can we make him? But we will order him not to scratch his face while we employ his hands at a dis-

tance. We will give negative forms of command which leave no room for disobedience, letting circumstances themselves enforce the law. Gradually we will introduce surreptitiously others of a more arbitrary nature, to which he submits himself without noticing the difference. Commands are alleviated by variety. When the rotary system takes the children from occupation to pleasure, lesson, exercise, labor, excitement, the forms of command must vary to meet indifference, antipathy, resistance, which may be successively provoked.

Seguin has been résuméd thus at length, and followed so largely verbatim because his book is still the classic of all literature upon idiocy. It is the first book upon this subject to be read, whether by the superintendent and teacher in the institution for the feeble-minded, the public school teacher, the parent, the sociologist, or any one interested in this unfortunate class. The spirit of Dr. Seguin's work upon idiocy is inspiring. His patience, his enthusiasm, his deep insight into the very soul of the idiot and his devotion, can but deeply impress every reader.

Other writers, notably Ireland, Duncan and Millard, have given valuable directions for the training of idiots in the institution and in the home.

Dr. Ireland's views upon the education of idiots are briefly summed up as follows:

Treatment should be both mental and physical.

Teaching must commence with simple exercises.

The best time to begin the training of an idiotic child is at about seven years of age.

The associating together of idiots is not harmful, but on the contrary helpful.

Dr. Ireland doubts that Dr. Seguin did not sometimes mistake the results of his training of low grade idiots.

Speech is generally, though not always, commensurate with intellectual ability. In teaching speech facial gymnastics are of no great importance, for all the muscles used in speech, he says, can be exercised at meal times. The word most easily taught at first are the nasal sounds, like "me" and "no," and the explosive consonants like p and b. Yet there are many exceptions. Vowels

alone are easiest to teach at first. The best way is to teach one vowel and then the sounds which are homologous. The method of overcoming deficiencies depends upon the individual disposition and malformations of the organs of speech. It is of little use to try to educate those who make no voluntary sounds.

Ireland's method of training the senses is essentially like that of Seguin's.

In teaching to read, Ireland would have a child learn to recognize syllables before letters.

Manual training is very important, but it is most difficult to frame general precepts.

The time of puberty is of great danger and the child must be carefully guarded. Above all things, imbeciles must be taught to work. Many imbeciles become self-supporting, but all need the influence of "favorable protection."

Some of the points made by Duncan and Milliard are the following:

Ordinary education and teaching are impossible with the idiot. They need even more forbearance, kindness, gentleness and attention than normal children. The primary training of the body is of greatest importance. There must be utmost regularity and perseverance in diet, exercise and habits. The mind must wait upon the body, and there should be clock-work regularity in all matters pertaining to health. Neglect in case of idiocy is worse than in normal children, therefore, from the day that idiocy is discovered, extra care and attention should be given. It is of importance to separate the different classes in education. The teacher should aim first to win the affection of the child; in this way obedience is best secured.

Utility should guide in the choice of things taught; especially should the perception and imitation of the child receive attention. There should be no idleness. It is useless to try to cram the memory of these children, and there is no profit in scolding and cuffing.

During the first few years great attention, especially in the habits of cleanliness, must be paid by the nurse to a child of the first class. By this means it is possible to raise such child into

Class II.¹ Class II in the first year should be treated as Class I. When the child has learned to walk, it should be taught little games requiring movement, such as throwing and running after soft balls, riding a rocking-horse. Music, too, should be used and bright pictures displayed. The nurse should watch for the first power to use the hands and exercise it. Teach the child to imitate the movements of the lips and mouth in talking.

To Class III dressing lessons must be given, habits of tidiness and obedience to command, taught, as well as lessons in speaking. Employ easy mechanical work, picking wool, sorting pieces of cut wood, playing with toys, Noah's arks, blocks and dolls.

Besides the fore-mentioned treatment a fourth class child should be taught to read, write, count and draw. More attention should be paid to behavior in the home, public places and the church. Use object lessons, teach form, color, to tell the time, simple weights and measures and the elements of geography. Teach them to play cricket, foot-ball, etc., out of doors; bagatelle and drafts, indoors.

Moral and medical treatment should go hand in hand. Take walks in fields, excursions to the seaside and to places of interest.

A child of Class V can seldom be improved much intellectually. Determine the grade of idiocy and treat accordingly. Such children are often more in need of individual training than others. Provide pleasing employment, but mental culture must be very gradual with this class.

Class VI must be treated even more on a medical and hygienic basis. These cases need the asylum.

Class VII may be well trained at home. They need much rest, slow movements and no gymnastics. Give them toys and simple finger exercises, and provide perambulators.

Class VIII needs most careful watching, much hard work, even mental anxiety, moral training and medical treatment.

Dr. Down also lays much stress upon care of the health and physical training, even to the minutest detail. Want of muscular coördination is the great fault of the feeble-minded, he says. All intellectual training must be based upon the cultivation of the senses. The child should be taught the useful necessary daily acts first, and later manual training. All this should be based upon utility. What makes a feeble-minded child useful makes him correspondingly happy.

[To be continued in the September number.]

¹Classes of Idiots.

JOURNAL OF PSYCHO-ASTHENICS.

Entered at the Postoffice at Faribault, Rice Co., Minn., as second class matter.

VOL. I.

JUNE, 1897.

NO. 4.

THE END OF THE BEGINNING.

With this number the first year of the JOURNAL OF PSYCHO-ASTHENICS is finished, and the members of the Association must decide what its fate shall be. While it can only claim a modest place in the field of special journalism, it has demonstrated that it has a place and that there is a future of increasing usefulness and prosperity waiting for it. For the realization of such a future it should have not only the good will of the profession and their words of encouragement, as experienced during the year just closing, but it should have their active assistance, 1st, in the co-operation of an editorial corps, each member of which should have a special department, as for instance, Neurology, Pathology, Pedagogics, Sociology, Bibliography, etc.; 2d, in making the JOURNAL the organ for the publication in the first instance of their new material. The disposition is natural to give the old well known journals the preference, but our own journal will gain a recognized standing only by giving it the preference, so that people outside of our specialty shall learn to look to it for the latest matter. Of course much valuable material of interest to us will be contributed by others to the old journals both here and abroad, and it is to bring this material together that the "selected" department has been opened for reprints, and this must continue to be an important feature of our periodical.

For the required financial support, it will be necessary for the institutions, public and private, to subscribe for a reasonable number of copies for distribution and to call the attention of a few of the leading dealers whom they patronize to the advantage of the JOURNAL for advertising their specialties. These means, together with the regular subscription list will easily make the enterprise self-supporting. Of course the editorial work must be a 'labor of love' for some time.

THE ORILLIA MEETING.

On page 155 is printed the programme for the meeting at Orillia, which promises to be an occasion of unusual interest. It will be noticed that the number of papers promised is larger than usual, and there is about equal attention given to subjects of a medical, a pedagogical, and a sociological nature, which is just as it should be. It is particularly encouraging to note the newly manifested disposition to interchange ideas on pedagogical matters, which, we believe will increase, and if so, the result cannot fail to give a higher professional standing to our worthy teachers, than is now generally recognized. Between those schools whose teachers have not changed too rapidly to permit the development of good school methods, there has been no suitable opportunity for the exchange of ideas. The JOURNAL has attempted to stimulate the writing of papers by teachers, many of whom have had extended experience with the feeble-minded and are capable of giving valuable advice. There is no reason why this department of our profession should not hereafter have ample representation in our association meetings.

The sociological side of our work should always be in evidence and it is the interest in this experienced by most of the members of the association, that has of late brought our meetings into such intimate association with the Conference of Charities and Correction, despite the fact that *in theory* the majority of the members believe the meeting should be independent, or if allied with any large body, it should be with the American Medical Association.

A rather interesting feature of this programme is the fact that the only large institution with a non-medical head, contributes five papers, three of which are strictly medical. There is no danger of the neglect of the medical interests of that institution under its present able management.

Dr. W. H. C. Smith and wife will open a private home and school for nervous and backward children at Godfrey, Ill., on Sept. 1, 1897. Dr. Smith's many friends who recognize his natural ability and long experience in the care of these special children, will wish him all success.

His location, "Beverly Farm," at Godfrey, is an hour's run on the "Alton" road from St. Louis.

THE STORM AT LINCOLN, ILL.

From the *Charitable Observer*, are learned the details of the storm catastrophe of June 18th :

"A chimney was blown down at the custodial building which falling through the north wing porch, did some damage. The roof of the boiler house and the north wing of the main building suffered some slight damages. At the farm was the greatest damage and suffering. For some years it has been a custom to send out classes of boys to do light work occasionally, such as picking peas, beans, etc., and it has always been considered an outing by the boys—in fact, the officers have trouble in satisfying the boys who are selected to go, for it is always a day of freedom, frolic and fun. On this fateful day, * * * * * were selected a class of twenty-six boys, who being placed under a trusty attendant were instructed to report to the farm superintendent. Joyfully they left the building and on their arrival did their work faithfully and well. * * * * *

When signs of the approaching storm were seen they started for the farm house, but not having time to reach it they unfortunately sought shelter in the large cow barn, a structure 173x28 feet, standing east and west when the wind, which was from the northwest, passed strongly upon it, the building toppled over to the south, crushing down its supports, and the haymow and roof falling squarely down, the roof remaining almost unbroken."

Four boys were instantly killed, the superintendent of the farm was injured on the head, the attendant injured in the back and one ankle and three other boys more or less bruised.

"The only wonder is that there was not a greater loss of life, and the fortunate escape of so many is almost miraculous."

HOW BIRDS DISPOSE OF DEFECTIVES.

Dr. F. Anderegg, a dentist of Faribault, Minn., relates the following: I was lying in my hammock one evening this summer when the noise and fluttering of birds attracted my attention. Looking in the direction of the disturbance I saw two birds flying, each with the tip of an out-spread wing of a third bird in its beak. I became sufficiently interested in the affair to follow them until I saw them stop over the wagon road and drop their load, at once flying away and leaving it. I picked up the deserted bird and found that it was blind and apparently imperfectly developed.

Programme for the Twenty-First Annual Session of the Association, at Orillia, Ont., July 14th, 15th and 16th, 1897.

Wednesday, July 14th.—Evening Session, 8 p. m.—President's Annual Address, M. W. Barr, M. D., Elwyn, Pa.; "Prevention of Idiocy," S. J. Fort, M. D., Ellicott City, Md.; "A Campaign of Protection," A. Johnson, Ft. Wayne, Ind.; "Degeneracy," W. A. Polglase, Lapeer, Mich.; General Discussion.

Thursday, July 15th.—Morning Session, 9 a. m.—Business Meeting; "Curability of Juvenile Nervous Diseases," A. W. Wilmarth, M. D., Chipewa Falls, Wis.; "Notes on Post Mortem Findings in Certain Abnormal Brains," Delia E. Howe, M. D., Fort Wayne, Ind.; "Abnormal Mouths of the Feeble-Minded," M. E. Le Galley, Ft. Wayne, Ind.; "Epilepsy, its Relation to Toxic States," Chas. Bock, M. D., Ft. Wayne, Ind.; "An Anthropological Study," Dr. A. Hedlecka, New York City; General Discussion. The Association will be under the direction of Dr. Beaton, of the local committee, during the afternoon and evening.

Friday, July 16th.—Morning Session, 9 a. m.—"Care of the Feeble-Minded from a Teacher's Standpoint," E. Gage Eldredge, Lapeer, Mich.; "Six Months of Number Work with a Feeble-Minded Child," Cora E. Wood, Orange, N. J.; "Things We Do and Would Like To Do in School," Edward R. Johnston, Ft. Wayne, Ind.; "A Class in Kindergarten," Miss Duel, Syracuse, N. Y. (Papers are also promised by Margaret Bancroft and Dr. Lawrence Glover, of N. J.) Discussion. Afternoon Session, 2 p. m.—Reports from States; Reports of Cases; New Methods for School and Hospital, reported. Closing Session.

It is presumed that most of the members will desire to attend the National Conference of Charities and Correction at Toronto, of which our honored associate, Mr. A. Johnson, is president. Its sessions will be held from the 7th to 14th. On the morning of the 12th, the care of Epileptics will be discussed under the chairmanship of Dr. H. C. Rutter, (Committee on Care of Insane and Epileptics) and on the evening of the 13th, Dr. F. M. Powell will direct the discussion of the care of the Feeble-Minded and present a paper on "Present Status of the Feeble-Minded, Prevention."

The Rossin House will be the rendezvous for the members on the 13th, at which place they will be notified of the local arrangements made by Dr. A. H. Beaton for the meeting at Orillia the following day.







Journal of Psycho-Asthenics.

Devoted to the

CARE, TRAINING AND TREATMENT OF THE FEEBLE-MINDED
AND OF THE EPILEPTIC.

Vol. II.

SEPTEMBER, 1897.

No. 1.

Published Quarterly at Faribault, Minnesota.

SUBSCRIPTION, \$1.00 PER ANNUM.

SINGLE COPIES, 30 CTS.

Entered at the Post-office at Faribault, Rice Co., Minn.,
as second class matter.

THE JOURNAL OF PSYCHO-ASTHENICS.

The only periodical in the English language of general circulation devoted exclusively to the interests of the FEEBLE-MINDED and of EPILEPTICS. Published under the auspices of the Association of American Institutions for Feeble-Minded. OFFICERS: Geo. Brown, M. D., Prest., Barre, Mass.; Mary Dunlap, M. D. Vice Prest., Vineland, N. J.; A. C. Rogers, M. D., Secy. and Treas., Faribault, Minn.; Mrs. Isabel Barrows, Boston, Mass., Official Stenographer.

Subscription \$1.00 per annum; single copies 30c. *Special rates for re-prints and quantities of any one issue for distribution.* Address communications to The JOURNAL OF PSYCHO-ASTHENICS, or to Dr. A. C. Rogers, Faribault, Minn.

CONTENTS FOR SEPTEMBER, 1897.

ORIGINAL ARTICLES:—

President's Annual Address—Martin W. Barr, M. D.	1
Auto-Intoxication and its Relation to Nervous Diseases— Charles Bock, M. D.	14
Number Work—Cora E. Wood,	22

SELECTED:—

Contributions to the Psychology of Feeble-Minded Children—G. E. Johnson,	26
Minutes of the Association	33

EDITORIAL:—

As others see us,	48
Studies of the Thyroid	50
Desexualization	50

NOTES AND ABSTRACTS:

Influence of the age of parents, etc.,	51
Alcove Beds for Epileptics	51

LEGISLATION	52
-------------	----

Journal of Psycho-Asthenics.

VOL. II.

SEPTEMBER, 1897.

NO. 1.

Original Articles.

PRESIDENT'S ANNUAL ADDRESS.¹

By Martin W. Barr, M. D., Chief Physician, Pennsylvania Training School for Feeble-Minded Children, Elwyn, Pa.

GENTLEMEN:—To me this year falls the pleasant duty of bidding you *twice* welcome, for we come together not only for our annual meeting, but also to celebrate the coming of age of our Association. Remembering that Pennsylvania was its birthplace, I count it for myself a most fortuitous concurrence of events that places me on this anniversary in the chair first filled at Elwyn by Dr. Seguin, and that I should be here to welcome back to the work our friend and my former associate, Dr. Alfred W. Wilmarth, of Wisconsin.

Born of the inspiration of the Centennial year, and with such enthusiastic workers as Seguin, Wilbur and Kerlin as its originators, it is no marvel that the association passing the period of youthful inexperience has lived to attain its majority in vigorous proportions, growing in this time from a membership of six to one hundred and sixty-three, with institutions and states falling rapidly into line, and to-day it adds to its list the names of Polk, Pa., and Chippewa Falls, Wisconsin. Gentlemen of the Association, "let us press forward." The day of mourning for our fathers is accomplished, and eulogies and panegyrics have been too long our theme.

¹NOTE—Read before the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons, Orillia, Canada, July 14th, 1897.

Forget them! we would not if we could, as we pursue the paths they opened with such patience and courage, but we must recognize that the plans they proposed have already been fulfilled. Our work broadens and must broaden—for one hundred years advance in the march of civilization opens to us new fields of which they could only give us the “peradventure.”

Both within and without, the work assumes new aspects. Closer classification and growing possibilities, drawing clearer and more definite lines between the trainable and the untrainable, are fast changing our school rooms to work shops and art-rooms. The massing and setting apart in happy, busy life of such numbers once deemed incapables, simultaneous with the movement of the new education to promote better classification in the schools, has presented a much needed object lesson and called the attention of the public to the study of the mental defectives in their midst, and of its bearing upon practical pedagogics.

Classes in sociology, physiology and psychology, come to us to observe, compare, and report likenesses and differences between normal and abnormal minds. This interchange of thought cannot but be conducive to progress and must influence both their work and our own.

The recognition as defectives of those backward and feebly-gifted children who have hitherto so embarrassed the work of the teacher has already led to new and better grading of the schools on the Continent and in London, while with us, Providence, Rhode Island, is taking the lead in a movement which must soon become general.

The new schools made up of this backward class, will naturally seek to be benefited by our experience in classification and training, and we shall draw largely from them if indeed we do not absorb them altogether; and it is just here that our work in its second half century takes a new departure. Relegating many of the occupations and means of development first employed by our pioneers to asylums, which may or may not be attached to future training schools, we shall press forward on the same lines to broader operations with possibilities of the ultimate establishment of communities of skilled artisans working in the various trades and applied

arts. Here the imbecile, separated from the world and forbidden to marry, shall become a self-supporting, self-respecting citizen, who in the possession of an assured freedom—always under careful direction and supervision—enjoys happiness and protection in lieu of ignorance, degradation and ignominy.

In addressing ourselves to work under these new conditions which are rapidly shaping around us, there are several points which conference may simplify and united action accomplish.

History already classes the rescue and training of the imbecile among the wonderful achievements of our wonderful age, and society, aroused not only to the knowledge of the existence of such numbers, but of the rapid increase, and agitated by questions which affect its very being, will soon demand of our century of experience some authoritative teaching as to remedy and redress. Are we prepared to answer the inquiries which must, and indeed, do, come to us frequently, many times throughout the year. For what are you preparing the imbecile? How can you secure the greatest happiness to the greatest number? How best render the imbecile harmless to himself and to the world?—are but a few of the many problems we are called upon to consider; to which might be added a discussion of how to meet the inevitable demand of the future for trained professional workers—physicians, teachers and attendants, and the advantages to be gained in establishing communities of the feeble-minded, and the advisability of seeking national aid in averting general and widespread calamity. These are the plain questions before us if we are to grasp and prepare for the momentous issues of this new era, which, I might almost say, calls anew for pioneer work. Results obtained from training, and also the grade of many applicants seeking training, plainly show that the day of the mere housing and self-help of the imbecile is no longer our one object, while on the other hand over-crowded conditions prove that we must educate the public to the difference between idiocy and imbecility. We must make some protest against the forcing into our institutions of the untrainable; and to this end might not an established sequence of manual work, following out the same line of development which we find so helpful in both kindergarten and sloyd for

the benefit of those who can enter upon it, be also a means of protection against those who cannot, and thus the legitimate work of the training school be not lost in that of the asylum.

Lest I absorb valuable time better spent in conference and discussion, I will not detain you by elaboration of these topics beyond a mere presentation.

For the first oft-repeated: For what are you preparing the imbecile? As to returning him to his friends after a few years of training, as the law in some states provides, the objections are manifold. In many cases our waifs and strays have neither home nor friends and the short period allowed hardly suffices for permanent practical results. After training they have no will to work unless apprenticed to people who understand how to govern without hurting them: and where are they? Again, the shifting conditions of American life forbid, often, any certainty as to locality of friends or stability of occupation. We cannot as they do in European institutions send the child out assured of that environment for which he has been trained. Indeed, we are assured of but one thing when he passes from our care; namely, that his return to the world in almost every instance insures an increase of population not conducive to national prosperity.

As to the second proposition: How can you secure the greatest happiness to the greatest number? Whether within or without an institution, congenial employment that shall prevent deterioration and preserve the self-hood to which he has attained is the *sine qua non*. To him, as for the normal, must be given "honest work for the day, honest hope for the morrow"—that brief to-morrow of completed toil without anxious care, which is all he may know.

The benefit of such a training as above outlined would be not only the perfecting of our work, but by commanding the attention and respect of the public, tend also to aid in their work of eliminating the feeble-minded from the common schools.

Already our ADVANCES along these lines has removed greatly the sense of obloquy formerly associated with institutions, and this appreciation must increase in proportion as the public comes to understand us. Thus in time we may find their "slow pupils"

sifted out and tested in these unclassified ranks already past rudimentary work, coming to form our middle and high-grade classes, and we can then train competent artisans in the various trades and crafts in sufficient numbers to really reduce expenses, and solve in a natural way the problem of how to secure the greatest happiness to the greatest number? But this, you will say, concerns only the imbecile for whom in low, middle and high grades may be found such occupation, while the future condition of the moral imbecile, the idio-imbecile and the idiot, demands equally our consideration. For these last, who, together with the epileptics, crowd upon us and impede so largely our work, filling the places of the imbeciles who, as I have shown, working at trades might materially diminish our expenses, we trust the future may yet free us. It is to be hoped that the day is not far distant when they shall here, as in Europe, be gathered into asylums quite apart and distinct from training schools upon whom they are simply a burden, neither receiving nor contributing benefit.

As to the moral imbecile it has become an accepted fact that he cannot be trained or properly cared for without greater restraints than those belonging to the ordinary training school. To confine him with idiots far below his intellectual grade is equally an injustice to him and a cruelty to those weaker brothers for whom he makes life miserable. A scape-goat for the sins of others, an inevitable enemy of society who must be forever set apart, this unfortunate victim of heredity seems doomed to a life-long penitentiary. The question for us is, how to lessen this isolation and atone to him for the unremitting and rigid surveillance necessary.

Enlarged bounds, suitable amusement and constant employment, together with proper facilities for control, should constitute an important department for this class in every institution. Entirely separated, yet sharing to a limited extent—conditional upon a good record—in its general privileges, these unfortunates, while contributing by valuable labor to the support of the institution, might yet find compensations, and a life service of comparative happiness.

How best render the imbecile harmless to himself and to the world?

This question, so nearly akin to the case of the moral imbecile, touches also the whole race of weak-wills and animal propensities.

The consideration of this, above all others, marks advanced thought; the effects of heredity becoming recognized in theory at least, are fast maturing in Legislative enactments regarding marriage.

New York and Connecticut have taken steps toward forbidding the marriage of epileptics, and Pennsylvania records the following act of assembly: "No insane or feeble-minded person and no person who from natural causes as distinguished from accidental causes shall have been insane in the past, and no person who shall hereafter have been twice convicted of felony as defined by the laws of the Commonwealth, shall be capable of marriage in wedlock, and any clergyman or civil officer who shall knowingly solemnize such marriage, and any person who shall knowingly assist in procuring or abetting the same, including the parties to such marriages, shall be guilty of a misdemeanor and shall be subject to imprisonment for six months and a fine of five hundred dollars, both or either, at the discretion of the Judge before whom the offence shall be tried."

This law, assuredly not stringent, will have its place as a check upon the *law abiding*, and will call the attention of the public to further needs of protection against the *lawless*; for history shows that the attempt to legislate for conscience is a vain one.

In nations, as in communities, wherever stringent marriage laws are enforced, the inevitable result has been free-love, concupiscence and prostitution. In dealing with the low and the bestial, with the ignorant and weak, the silly and the irresponsible, with utter incapacity to comprehend any law but that of self-will, there is nothing to convert or convince, for the moral sense is not there to appeal to.

To such a class asexualization would come as a double release, freeing them from the power of harming themselves and society, and granting in all else greater personal freedom to the individual, whether without or within institution walls. Once rendered harmless, he is free to gather all he can from life.

With imbecility and its many phases of sexual perversion, recognized as a disease—a sure means of transmitting inherited taint—it does seem absurd that while we wage war upon microbes and bacilli, we turn loose this worse than leprosy to poison the very springs of life in more ways than one, forgetting, “The evil which men do lives after them.” Why do we not more closely follow Nature’s law? All seeds, all buds, do but perpetuate their kind, and we but follow the lesson taught when we shake the bough from which falls defective fruit. We choose and set apart with care the animals best fitted for procreation, and by castration render more docile, because less passionate, the beasts of burden who are to mingle in the common herd. They rove at will free and unrestrained—because harmless. I need not point the moral nor draw further analogy.

Separate the love of one’s kind and the consequent desire to project one’s individuality upon the onward current of humanity, and procreation has no element above the mere animal. We all know that with imbeciles the first is impossible. Then do we not best serve them when in loosing them from the thralldom of the second, we release them from restraints thenceforth needless, and therefore open to them greater happiness in individual and in community life?

Sir Thomas Moore says: “The world is undone by viewing things at a distance.” Let not this mistake be ours.

Here even more than in previous questions it behooves us to prepare to speak authoritatively and to give when sought, as will surely be of us, an answer that cannot be misunderstood. I say will! The issue is even now upon us.

That which was spoken of with bated breath and behind closed doors already begins to be the subject of open discussion, and to appear in reputable journals. I quote from the July number of the *Altruist*: “Besides being prevented from propagating their kind, the feeble-minded need constant care and training in order that they may use their limited faculties to the best advantage and get some pleasure from their blighted lives. This means complete isolation and special training and supervision, the expense and trouble of which could be materially lessened by the asexualiza-

tion of those who were decided, by a committee of medical men appointed for the purpose, to be fit subjects for the operation.

From this severe measure the mind instinctively shrinks, though it is now advocated by many of those best acquainted with the subject; and when calmly considered in the light of modern science, and as a choice of two evils, will probably be accepted as a necessary evil by all right-thinking persons. Further, increasing surveillance would be necessary unless asexualization were legalized. But, under any circumstances, isolated and cared for, they would be safe from themselves and society, in congenial company, under no danger of ridicule, using their limited powers for their own benefit, and, in some cases, for that of the community, and in no danger of transmitting their misfortune."

The courageous attitude of Dr. Pilcher, of Kansas, as pioneer, strong to face ignorance and prejudice, has already had its good effect.

The report of the Trustees thus sustains his action: "A great deal has been said in the political press and medical journals of our country about the unsexing of eleven boys by Supt. Pilcher, the political papers censuring and the medical journals sustaining him. As all forward steps have brought criticism to the person who had the courage to take them, so this humane act has brought criticism to Doctor Pilcher. All that would be necessary to convince those most horrified by this act, of the wisdom of it, would be to have known the boys before and after the operation. Those who are now criticising Doctor Pilcher will, in a few years, be talking of erecting a monument to his memory."

One of my own board, Dr. De Forest Willard, of Philadelphia, has already taken steps toward bringing this subject before the public in a circular letter, which, together with the replies received, he has kindly allowed me to use, and which I here present:

"DEAR DOCTOR:—Will you kindly give me your opinion upon the following points. Please indicate your desires in regard to the publication or non-publication of your name in connection with these sentiments and your wishes will be strictly observed:

1. In what proportion of the inmates of your Institution do you consider procreation advisable?

2. In what proportion of the inmates of your Institution do you consider procreation possible?

3. What would be the probable effect of asexualization upon their mental and moral conditions?

4. What effect upon their physical conditions?

5. What operation would you advise upon the male; removal of the testes, ligation of the cord, or ligation of the vas deferens?

6. What operation would you advise upon females?

7. At what age would the operation be most effective?

8. Have you had practical clinical experience in this matter?

9. Should a State law be enacted to legalize the operation? If so, what would you suggest in regard to such a law?

Yours truly,

DE FOREST WILLARD.

From the fifty-nine institutions—twenty-five American and thirty-six foreign, including those of Great Britain, France, Germany, the Scandinavian countries, Austria, Russia, Switzerland and Finland—he received but twelve answers, nine American, one German, one Scotch and one English. But nine could give definite answers, and while all agree that procreation is not advisable, they are slow to express an opinion, except that asexualization should be performed only on those of the highest grade, considering that the class to be most feared.

The first question is unanimously answered "none;" the second, an average of 80 per cent. The non-committal tenor of the replies to the third and fourth, as to mental, moral and physical effects, evidences the limited opportunities for collecting sufficient data, or timidity in expression of opinion. The fifth, sixth and seventh, as to the *modus-operandi* and proper age, are more explicit—the majority favoring testiectionomy in the male, and ovariectomy in the female, at or before the period of puberty.

To question eight, five state frankly that they have had no practical experience, and the others give but indifferent answers.

To the ninth, as to Legislative aid, two-thirds are of accord, two see no cause, and one is doubtful of success.

That the replies amounting to but one-fifth of the whole should be almost exclusively American, and in the main favorable, show

our confidence in both subject and leader; while the conservatism of the Europeans, and their consequent carefulness in the adoption of new ideas, may account for the meagre response from abroad.

My own experience, although limited, has been decidedly favorable; three cases of ovariectomy and one of testiectiony have resulted in improvement, especially marked in a boy, who has grown mentally, morally and physically.

My preference, therefore, inclines to ovariectomy in the female, and testiectiony in the male, pure and simple; but if one objects to this, a harmless and almost painless operation, (although the temperature after it does run alarmingly low) vasectomy is less heroic, and it is said quite as effective as castration.

Pavone¹ reports thirty-four cases where he had performed vasectomy for other reasons, in normal persons and with marked success.

On the whole, the result of Dr. Willard's investigation shows a readiness to advance, wherever united action shall ensure encouragement, in the more difficult task of educating the public mind.

It remains, therefore, for us to confer upon a subject so vital, and as I doubt not that we are of accord, to devise ways and means by which, in addition to mere official utterances, we may best further Dr. Willard in legalizing methods which shall benefit alike society, these unfortunates and ourselves, the custodians of the race.

We cannot hope to convert the public in a single day, nor to secure Legislative enactments in a single year, but patience and indomitable perseverance in presenting the subject must finally overcome mere prejudice and prove conclusively that this can bring but gain to society and the individual, without loss to either.

Colonel A. C. Holt,² a Southern legal authority, says that we have no clause in the Federal or State constitution which forbids emasculation where necessity demands it. (vide note page 14).

Dr. Willard has drawn up for suggestion the following outline of a resolution for an act:

¹Il Policinico, No. 15. 1896.

²(J. M. Frizier, paper read before Central Texas Medical Society at Waco, Jan. 15, 1896.)

“An Act for the Prevention of Idiocy.”

“Whereas:—Hereditry plays a most important part in the transmission of idiocy and imbecility;

“Therefore, be it enacted by the Senate and House of Representatives of the State, that on the first day after the passage of this bill it shall be compulsory for each and every institution in the State, entrusted with the care of idiots and imbecile children, to appoint upon its staff at least one skilled neurologist, and at least one surgeon of recognized ability, whose duty it shall be, in conjunction with the Chief Physician of the Institution, to examine into the mental and physical condition of the inmates.

“If, in the unanimous judgment of this committee of experts, procreation is unadvisable, and there is no probability of improvement of the physical and mental condition of the inmate, it shall be lawful for the surgeon to perform such operation for the prevention of procreation as shall be decided safest and most effective.

“This operation shall not be performed except in cases that have been pronounced non-improvable, after a year's test; and in minors, the consent of both parents, or the guardian, if living, shall be procured in writing, if possible.

“Penalty, \$100 fine for the non-fulfillment of any of the provisions of this Act.”

The future has for us yet another question—another work in which we are called to press forward.

What are we doing for those who are to follow us? For what are we training our assistants? The trend of the times shows a demand for specialists.

We take a young man fresh from a medical college, filled with theories, with little or no practical knowledge, into the weary rounds of institution duties which in the best are yet the same—and with the idea of specializing uppermost in our minds—we immure him, bend him, break him, impose our personality upon him, and let him have no thought beyond that of the superintendent and the senior assistant. Train him? We violate the law of personal liberty, destroy his manhood, teach him that life as well as nature has its night-shade berries, and what have we at the end of ten years? A man in years and a dwarfed mind,

despite nature's original purpose. In fact he ceases to be a man and becomes an automaton, a lay-figure—the creature which in our arrogance we pride ourselves upon having made—blindly ignorant of having perverted from natural channels the gifts of God.

I can remember in one hospital, (where I gleaned my experience, literally by the sweat of my brow and the work of my hands) when I occupied an anomalous position, not having the authority of the supervisor nor the personal liberty of the attendants, being left entirely out of the superintendent's confidence, cut off from all society with only study for a recreation. How can a man's mind flourish, his faculties live in this refinement of cruelty? Let us cast aside these musty ideals and learn a better lesson from the creative Florentine artist of the Renaissance, to whom art meant the "embellishment of the daily life."

There should be better opportunity for choice of material, unfettered by personal or political influence. Then, with good men and women to work with, we should see to it that there be no case of arrested development or crushing out of individuality. Would it not be well to bear this in mind in training our assistants who are to lead the future medico-pedagogic schools, and equally so with all assistants in the various departments, both higher officers and attendants, whenever we recognize earnest, devoted purpose, not only permitting but encouraging a freedom which shall further this, and, even at the cost of a few mistakes, go to build up a true motor force?

The enlarging of existing institutions, the growth in numbers, the possibilities demonstrated in methods of training and the recognition of a class who will surely come to us, bringing to a much higher figure the one hundred thousand which late statistics give—all these, coupled with the need of greater facilities for training workers for all departments, point to a third epoch in our history. Having developed first School, second Institution, we now come to add the more extended sphere of Community Life.

Assuredly if we are to rise to the responsibility of the times, to grapple with this enemy one hundred thousand strong, which enters all homes alike and threatens the very life-blood of the nation, we must enlarge our borders and extend our operations. We

need space, and yet more space, and who than we better fitted to claim it?

United and persistent warnings on our part must convince the most sceptical, and in less than another decade the return of the imbecile to the world will be deemed almost a crime, and opposed to all ideas of sound policy.

The wonderful Colony of Mercy at Bielefeld, Hanover, the efforts of the industrial Colony associations with us, and the inauguration of the various child republics following close upon the success of W. R. George's philanthropic experiment, should command our attention and generous emulation, knowing as we do that these must number of our class not a few.

The National government has provided for the Mute, the Negro and the Indian—then, why not for this branch of population increasing as rapidly as they, and becoming yearly more inimical to national prosperity. A reservation set apart, affording facilities for agricultural pursuits as well as all the varied industries of a town, would provide an outlet for the surplus population of our institutions, to find there a home with definite life aims constantly realized. Such a colony, under such restrictions and protective care as our experience has proven is essential, a congregate number of institutions, so to speak, each with its own corps of officers and supervisors, might in time draw largely upon us for its inferior force—sub-assistants, attendants and foremen in shops and work rooms—which we, if relieved of extraneous burden, and training, with definite aim, could readily supply. A community, not of paupers but of honest laborers, living under a system of “wise protection,” insuring the personal liberty and personal responsibility which alone renders permanent the moral tone.

It was an axiom of the Romans that purity of descent preserved the harmony of both public and private life.

To the Greeks we ever turn for pure ideals, and in the light of the nineteenth century, Spartan customs, far from cruel, by preserving the integrity of moral law, forbade the filching of the great gift of life—granted according to the will of the gods—divine; clutched at and hurled through ignorance or passion—infernal.

“The sable land-flood from some swamp obscure,
That poisons the glad husband-field with death,
And by destruction bids its fame endure,
Hath not a sense more sullen, stagnant and impure.”

AUTO-INTOXICATION AND ITS RELATION TO NERVOUS DISEASES.

Charles Bock, M. D., Ft. Wayne, Ind.

Much interest has recently been aroused, and many valuable discussions presented on the subject of auto-intoxication as a causal factor in the production of certain hitherto supposedly functional nervous diseases, notably epilepsy and acute insanities.

Much evidence in favor of such a theory has been deduced. It cannot be doubted that toxæmic conditions do certainly so frequently co-exist with these diseases as to strongly suggest the relationship of cause and effect.

Dr. Cabitto, of Genoa, has found that during the prodromal stage of the attack of epilepsy, the patient's perspiration produces in a rabbit convulsions when injected in doses of from 10—15 c. c. The toxicity increases gradually as the attack approaches, and diminishes after the attack. He therefore uses the hot air bath as a rational treatment, and claims much success therefrom.

Prof. Bose, of Montpellier, has shown by experiments on animals that the urine in hystero-epilepsy during and after the epileptiform attacks is much less toxic than normal. It reaches its highest degree of toxicity just before an attack, at which time it may be slightly hypertoxic.

Obrija finds that in the evening preceding an attack of epilepsy, the toxicity of the urine is greatly diminished; but immediately after the attack it increases markedly, to diminish progressively afterward. He also states that the approach of a period of excitement in melancholia or periodic insanity may be prognosticated by a diminution of the urinary toxicity. This condition is due to the toxins being retained in the system.

Teeter, of Utica, N. Y., has found during a period of about four month's observation in a single case of epilepsy, that there is deficient elimination of urea prior to the attacks, but following the attacks the urine has a higher specific gravity with greater amount of urea.

A. M. Bleile, of Columbus, Ohio, has recently, at Gallipolis, made urinary examinations of twelve epileptics covering a period of 30 days. He found that the epileptic attacks cause no variations in a definite direction in either the amount or specific gravity of urine voided. In the majority of cases the elimination of phosphates was increased more noticeably on attack days. In all the cases but three, the ethereal sulphates were decreased. This he seems to attribute to the difference in diet which is given epileptics. An increased amount of indol in a fair number of cases, both during intervals and during attacks, was present; no decisive information was gained as to the increase or decrease of urea or uric acid relative to the attacks. As regards toxicity of the urine, several methods for the isolation of toxic bodies were employed, only one of which gave any results, this being the ether method. Urine from an epileptic following a series of attacks treated by this method and injected into frogs, produced retardation of reflexes, inability to swim or jump, general convulsions, muscular contractions, simulating tonic and clonic spasms, followed in 45 minutes after injection by death. By this method on rabbits or guinea-pigs the results were negative. Experiments on 15 rabbits by intra-venous injection of urine show a hypertoxic condition in 14 cases, one case giving negative results, eleven cases marked toxic symptoms and three cases convulsions and death.

Voisin and Petit conclude from their observations that epilepsy due to intoxication is more grave and invariably associated with, and preceded by gastro-intestinal symptoms; while so-called reflex epilepsy is less grave and not accompanied by gastro-intestinal disturbances. The author, therefore, combines for its eliminative effect pilocarpine with potassium bromide in treatment of epilepsy with violent excitement. He claims that the gastric disturbance due to the bromide is thereby much lessened and the excitement controlled.

Dr. Alexander Haig believes that uric-acidæmia is a potent causal factor of the epileptic seizure. To overcome this he advocates restriction of diet, forbidding flesh food and all vegetable substances containing xanthin compounds. He considers the relationship of epilepsy to uric acid headache well established. Rackford

mentions a case in which he believes paraxanthin acted as a factor in producing the epileptiform attack. Herter and Smith have found that in many cases intestinal putrefaction co-exists with epileptic attacks, also that the first symptoms of neurasthenia are those of intoxication, and question if the neurasthenia may not be of toxic origin.

Drs. Huchard and Boret have examined the chemical conditions in the stomach of a tabetic patient suffering from hæmatemesis and vomiting of food. They find great variability in the gastric secretion. They believe that no anatomical lesion underlies this variability, but that it is of nervous origin. The persistence and even the increase of vomiting under milk diet was due in their opinion to hyperpepsia causing too rapid coagulation. During the intervals of the crisis there was hypopepsia. This variable chemical condition of the gastric secretions required varied diet as in one of our cases, which will be mentioned hereafter. Turner, from the basis of 150 urinalyses in advanced cases of general paralysis, states that the amount of combined sulphates is greatly increased, and the proportion of combined to preformed sulphates is greatly in excess of the normal, this latter condition being indicative of active putrefactive changes within the intestinal canal. Finding these conditions of the urine present with surprising regularity at or near the occurrence of epileptiform seizures, they are mentioned as a probable cause for the epileptiform attacks of paresis.

Ludwick and Lavor, of Vienna, from their experiments by inoculating animals with blood-serum and urine of eclamptic patients, observed that during the convulsions the toxicity of the urine is much less than at other times, while that of the blood increases during the convulsions. They conclude that retained toxins are the cause of eclampsia which indicates immediate eliminative treatment through the different channels.

Masson, of St. Petersburg, claims as a cause of eclamptic convulsions the absorption in large amount of partially oxidized bodies or "leukomaines," which are present in considerable quantities in the body of pregnant patients.

N. Strefani shows by examinations of urine in a case of cycli-

cal insanity, that during the depressive stage there is a decreased amount of urea and phosphoric acid eliminated, the probable cause for this being a metabolic change of cerebral tissues. He adheres to the opinion of an increased elimination of these products during the excited stages.

Dr. Andriezen says as to toxines formed in the central nervous organs, this possibility must not be overlooked. Toxines may form in muscle and gland from chemical products generated during activity of such tissues. In the general paralytic and in the chronic alcoholic the lymphatic structures are affected in a special and peculiar way, producing in places blockades of lymph streams and overgrowth of lymphatic cells, which affect different spots, centers and tracts of the central nervous system. The products of metabolism of the nerve cells would thus be in places retained in the dilated or obstructed sacs and lymphatic channels, producing from time to time various symptoms of toxins; the toxine being in such cases the unescaped, uneliminated products of cell activity.

C. Hubert Bond, London County Asylum, Banstead, detected marked renal changes in 48 per cent. of 154 autopsies on the insane; the same being true at St. Bartholomew's hospital, London, in 26 per cent. of 422 autopsies on the insane.

Dr. Allan McLane Hamilton, from experiments and observations as to the relation of auto-toxis with insanity, formulates the following conclusions:

1. Urine rich in indicans contained very little or no preformed sulphuric acid and was toxic.

2. When the sulphate ratio is materially changed with an increase in the amount of combined or ethereal sulphates it probably indicates auto-toxis. Such conditions generally existed with the acute insanities.

3. Changing illusions and hallucinations, unsystematized delusions, confusion and verbigeration, in connection with insomnia, pallor, intestinal indigestion, constipation and rapid exhaustion, are due to auto-toxis.

4. Variations in the excretion of combined sulphates keep pace with the changes in the progress of an established insanity, epileptiform attacks being directly connected with putrefactive processes.

5. As the most successful treatment he adopts lavage, intestinal douches, gastric and intestinal antiseptics, as hydrochloric acid, borax, sodium salicylate, charcoal, guaiacol, or naphthalin given in small and repeated doses.

Although we have made no experiments as to the actual toxicity of the various excretions of epileptics, our observations tend to confirm us in the belief that in the greater number of epileptic cases, especially during attack periods, some form of gastro-intestinal auto-toxis exists. The conditions present varying degrees of symptoms, as general malaise, lassitude, headache and epigastric pain, flushing or pallor of the face, cold and clammy skin, sub-normal temperature, slow, weak pulse, faintness, distension of abdomen, flatulence, anorexia, coated tongue, vomiting and intestinal paresis. The vomitus in these cases consists mainly of undigested food that has been long retained in the stomach and shows putrefactive changes. In one instance egg was vomited ten hours after being ingested, while five days later portions of egg taken at same time as the above were passed per rectum. This occurred in a girl aged 10 years. In the same case there followed a hypersecretion of gastric fluid; milk would form a very tough and thick curd in a few minutes after being taken. Sometimes in the same patient there is hyposecretion and at other times hypersecretion, the diet requiring to be changed in accordance with the conditions present at various times. Another case, a boy aged 12 years, has epileptic attacks quite infrequently, but when they do occur they are continuous for a period of two hours or more, and are always accompanied with abdominal distension and retention of undigested food in the stomach and intestines. No relief for this condition of status can be obtained until the stomach and lower bowel have been well emptied and irrigated. Our method of procedure has been to use warm water rectal irrigations, then to introduce the irrigating tube beyond the sigmoid flexure and flush the colon; for this we advocate the double current irrigator, as with it the difficulty of water being retained is overcome, and the flushing may be continued with much better facility and more satisfactory results. This frees the lower bowel of all fecal matter and promotes the expulsion of gases. For emptying the stomach,

it is well to first have the patient drink from one to three glasses of warm water. In cases of status, water may be introduced into the stomach with the tube. If this does not produce emesis, a small dose of apomorphia should be given by hypodermic. Lavage of the stomach with double current irrigator, or simple application of stomach pump, do not meet the requirements in all cases, as with them the larger particles of food are not removed, and in most of these cases chunks of undigested food still remain in the stomach. In the greater number of these cases apomorphia is indicated. Besides producing emesis it relieves venous congestion, probably by increasing arterial pressure. It acts much more promptly than morphine in relieving motor excitability, not only where such excitability is expressed by spasm, but also in the intense excitement of epileptic furor, and especially in post or pre-epileptic excitement where the conduct resembles that of hysterical mania. In these latter cases we have had some striking results, the patients becoming perfectly calm in a few moments and remaining so. The result of this remedy is too prompt to admit of the inference that it produces its good effect through the removal of toxins. In some cases of status where there is danger of the food being drawn into the respiratory tract in the act of vomiting, we used apomorphia with some degree of hesitancy, but no bad results have followed. Efforts at relieving intestinal contents are not always of avail, as in some cases there appears present a condition of adynamic or spastic ileus as in the following case: A girl, aged 20 years, who was admitted to the hospital at 11:30 a. m. in status epilepticus, abdomen greatly distended and tympanitic throughout. At first the patient vomited bile and afterwards the contents of the duodenum. With these evidences of obstruction, an effort was made with repeated flushings of the intestine to open the bowels, but without avail. A rectal tube was passed to the transverse colon, but only a small amount of gas was withdrawn. By application of the stomach tube the stomach, although now apparently empty, was irrigated and quite an amount of gas expelled, abdominal distension however remaining the same. To stimulate respiration which was becoming embarrassed, and with the hope of relaxing the intestine should the obstruction be of

spasmodic origin, a hypodermic of atropia was given. This improved the respiration but had no effect on the intestines or the general spasms. Stimulating enemata of turpentine were given, also hot turpentine stupes were applied continuously to the abdomen. No benefit derived, patient gradually getting worse. Later on several punctures through abdominal wall into distended bowel were made, also an incision in linea alba and bowel punctured with a large hypodermic needle. No appreciable amount of relief followed. Reflexes were abolished. Patient had spasms at very short intervals, almost continuously, during first 20 hours immediately following admission to the hospital, at expiration of which time she was given an enema of chloral and bromide. The spasms now ceased, distention remained great as ever, patient became comatose and died 25 hours after admission. Autopsy two hours later revealed no mechanical obstruction, but in many places the intestine was very much contracted, barely being pervious to liquid or gas. The stomach and small intestine throughout were greatly distended with gas, the duodenum and upper part of jejunum containing small amount of fluid the same in character as that which had been vomited. The transverse and descending colon were moderately filled with gas, the rectum being empty. Peritoneal cavity empty, and peritoneum perfectly normal in appearance. So far as other findings of importance are concerned, the autopsy was negative.

In the face of all this evidence, it still remains to be proven that the toxic conditions so often co-existing with epilepsy and acute mental disease are not primarily, rather the result of some change in the nervous system than the cause of this change. That similar conditions may be induced through the action of the nervous system influenced by the emotions, can scarcely be doubted. The poisonous effects of a fit of anger resulting in a whole train of toxic symptoms have been frequently noted. In many persons the loss of one night's sleep is followed by derangement of the whole intestinal tract, and a high toxicity of the secretions. Any nurse will testify that the young babe fed from the breast of a woman who has recently received a mental shock, or indulged in anger, is liable to show symptoms of poisoning. In our experience in the I. S. F. M. Y., the epilepsies that are dependent upon

coarse brain lesions show symptoms of intoxication just as frequently as do those in whom such lesions are not demonstrable, and we question whether it is not more probable that the nutritive lesion of the nervous system which permits of an abolition of its inhibitory power over the motor centers, may not, also, by its failure to control and regulate the organic processes, be the direct cause of toxaemias. We would not underestimate the importance of reducing by every means in our power auto-intoxication; for even though we believe it the result rather than the cause of the nervous disorder, we must admit its deleterious reaction upon the nervous system, and if the organic processes can be made simpler and easier by diet and other hygienic measures, the nervous energy required for regulating these processes will be correspondingly diminished, and may prove adequate where otherwise it would not. Every effort to relieve toxaemic conditions associated with epilepsy and acute mental disorders has failed in some of our cases until remedies that acted directly upon the nervous system have been given, when said toxic symptoms have quickly disappeared.

In the case of the girl above mentioned, whose gastric secretions were so variable and putrefactive changes in stomach and bowels so marked, the most rigid measures for relieving these failed until large doses of chloral were administered twice daily by the stomach, whereupon the spasms ceased, the tongue rapidly cleared, the gastric and intestinal secretions became normal.

In review, then, I would state the following conclusions:

1. Conditions of auto-intoxication frequently co-exist with epilepsy and acute mental disorders.
2. Certain conditions of the nervous system may produce similar intoxication.
3. Remedies directed to the nervous system will often control the toxic conditions when other measures fail.
4. While it is not proven that auto-intoxication is the cause of epilepsy and acute insanities, this condition tends to increase and prolong the disease and should be relieved by every possible measure.

NUMBER WORK.

Six months of work with a Feeble-Minded child.

CORA E. WOOD, Orange, N. J.

A was a boy twelve years of age who had received but one year of training when he was entered for number work. This one year, however, had fitted hand and eye and aroused the arrested faculties sufficiently for the beginning of calculation. We began with twenty minutes of individual work each day, and a little later twenty minutes more were allowed for practice in written work. The desk before which we worked was littered with books, slates, pencils, coins, dominoes, an abacus and a pack of playing cards, beside a box filled with various smaller objects. The child began by tracing a copy of the first three digits by the side of which were marked the requisite number of dots, stars, or circles to represent the value of each. These were traced day by day, a new figure being added as soon as the child was able to make alone the first ones given. Counting was begun at the same time, beginning — “I have one nose” — “I have two eyes” — “There are three buttons on my coat” — and so on, continuing with many different familiar objects. Next the figure *four* was given to trace, beside which were also traced four small circles arranged in groups of two. Then dominoes were shown and A was taught to count the two spots, the four spots, the one spot and the three spots, after which he was asked to find the same. Similar practice was given with playing cards; the teacher first arranging the coins in the different groups already learned, and afterwards requiring the child to do the same from memory. In this and various other ways we proceeded until all the digits had been learned, omitting the tracing as soon as the hand was sufficiently trained to form the figure alone, and continuing each day to require the child to count off as many balls as would represent the value of each digit, or to draw by the side of any given figure as many circles, dots or marks as the same required. In arranging the dots for *five*, we grouped as for *four* adding one in the center — for *eight* in groups of four — for *nine* in groups of three — and for *ten*

in two groups of five dots each. This fixed arrangement gave the pupil a fair conception of the relative values of the first ten numbers, and in time he became able to perceive that *nine* is a greater number than *three*, or that seven is a greater number than two. He learned to explain that he would prefer *ten* candies to *four* candies and that he would rather lose just one cent than to lose seven cents. He was now able to tell at sight the number of dots on any given domino—also to tell the number on any of the playing cards to the seven spots—and the others by counting if not by sight. He had become somewhat familiar with the coins by the daily use of one cent pieces in his written and oral work, and was taught the value of the five-cent piece by comparison; later he learned to count five cents and one cent—this being continued as work was given in addition. During the last stages of this work addition was begun orally. Given a one-cent piece in the left hand, the child was taught to say, “I have *one* cent,” then a one-cent piece given into the right hand and he was taught to say—“and *one* cent are *two* cents,” putting the two coins together as he repeated the formula. This was practiced for many lessons, using a variety of objects, continuing all former drills and introducing two or three more combinations. Then came the time for written work. Two one cent pieces were laid on the frame of the slate, and with the left forefinger the child pointed to the first coin and said, “one cent,” which he wrote on the slate as *one*. Moving his finger to the space between the coins, he was told to say “and,” and was taught to make the sign of addition; he then moved his finger to the other coin and again made the figure for one cent, after which he was told to move the coins together, at the same time being shown how to make the sign for “are” or “equal,” the meaning of which was comprehended later through the repeated action of putting together. At last the pupil said, “There are two cents” and was taught to write the answer in line. This was carefully continued until, through many weeks of constant oral and written practice, —*never without objects*—the child began to comprehend the first nine combinations, or all those the answers to which do not exceed six. During the same time, the combinations being learned, they were occasionally written on slate or paper and the child required

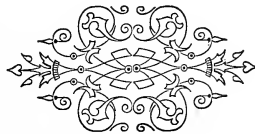
to illustrate the same with objects by arranging to represent the numbers in the order written, much of this work being done with but little supervision.

Another exercise that was helpful in the training and pleasing to the pupil was carried on in the following manner: A has five cents given him; they are laid on the desk and he is told to look at them carefully and then close his eyes, or turn his face away. In the meantime the teacher takes two cents away and then asks A to look and tell how many cents he has lost. In case the child cannot tell, the objects abstracted are replaced and recounted. Sometimes the teacher takes away all the coins, or objects given, to make sure that the whole number is remembered. At other times, none are taken and a puzzled expression gives place to one of amusement when the "little joke" is made apparent. When A is asked how he knows the number of cents he has lost he almost invariably replies, "I can see them," which proves that after seeing a group of objects he retains an idea of the same. The daily drill in counting was not relinquished, as difficulty long existed when any movement of the hand was necessary in pointing. Some practice was also given in counting from *ten* back to *one* for the purpose of fixing in the mind of the child the relative positions as well as the relative values of the digits. Near the close of the fifth month we began the Roman letters, first talking about the clock and trying to arouse some ambition to learn to tell the time of day. This work was begun by giving the first three letters to trace, afterwards to copy, and finally to write from memory, two more being added before the end of the sixth month.

Now, very naturally, the reader wishes to know just what was accomplished during this time. Comparatively little. The beginning is not yet ended. Daily drill in counting, daily practice in writing combinations from objects arranged by the teacher, and daily practice in arranging objects to illustrate the written combinations still constitute the greater part of the work. A few other methods have been gradually introduced—the acme of interest being reached when the child was first allowed to write answers alone, and without objects, to certain combinations written upon the blackboard. No great or unusual results have been obtained,

but there has been laid a sure foundation upon which to build for future work. The prime effort has been to train the mind to a reasonable comprehension of the relative values and positions of the digits; to train the eye to recognize quickly; the ear to hear accurately, and the mind to grasp practically—all, that the child may become something more than a mere passive recipient of certain arithmetical formulas. Working from the simple to the complex, and introducing nothing new too soon or too frequently, and allowing the greatest possible variety of work, the lessons have been a pleasure rather than a dreaded period to be passed in positive weariness because of endless repetitions.

Not always have there been recitations of perfect attention and eager desire to do well. There have been times when carelessness, inattention, or thoughtlessness have been betrayed by the answers given or written; but, on the whole, the results have been such as to warrant a continuation of the simple methods used, after allowing for any modifications which the ingenuity of the teacher may suggest to meet the varying individual requirements of that unfortunate class of children to whom number work is the *bête noire* of school life.



SELECTED.

CONTRIBUTION TO THE PSYCHOLOGY AND PEDAGOGY OF FEEBLE-MINDED CHILDREN.

BY G. E. JOHNSON.

Fellow in Pedagogy, Clark University.

I.

(Continued from June number.)

RESULTS OF EDUCATION.

As to the improvement made in idiots by training, "Not one in a thousand," says Seguin, "has been entirely refractory to treatment; not one in a hundred who has not been made more happy and healthy; more than thirty per cent. have been taught to conform to social and moral law, and rendered capable of order, of good feeling, and of working like the third of a man; more than forty per cent. have become capable of the ordinary transactions of life under friendly control, of understanding moral and social abstractions, of working like two-thirds of a man; and twenty-five to thirty per cent. come nearer and nearer to the standard of manhood, till some of them will defy the scrutiny of good judges when compared with ordinary young men and women."¹

Dr. Howe wrote of the Pennsylvania School for Feeble-Minded Children:

"It has rescued some children of merely feeble minds from the imbecility into which they had fallen either through abuse or neglect, or unwise treatment, children who were considered as idiots, and who would have sunk into hopeless idiocy but for the help of this school."

"It has given speech to some who were dumb, and who, if left without special aid, would have remained dumb."

¹"On Idiocy," p. 74.

"It has greatly improved the condition of more than four-fifths of its pupils, as their friends will testify."

"They have been put into a higher state of health and vigor. They have been trained to the command and use of muscle and limb. They feed themselves, dress themselves and conduct themselves with decorum. Their gluttonous and unseemly habits have been broken up. They have been trained to temperance, cleanliness and order, till these habits have become a second nature. Their powers of self-control have been increased, and they strive to make themselves less unsightly and disagreeable to others."

"Many of them have been trained to habits of industry, so that they may at least be less burdensome to their friends."¹

In a report concerning the Royal Albert Asylum, of Lancaster, England, and the results with feeble-minded children under the kindergarten system, we find:

"Of 100 who left the Royal Albert Asylum at the end of seven years, instead of 36 speaking well, as was the case on their admission, 50 spoke well; 22 spoke fairly, instead of 23; 13 spoke indistinctly, instead of 15; and 15 only, as against 26, were unable to speak intelligibly."

"Of 100 boys discharged after seven years' training, there were 36 who had learned to read, 14 well and 22 fairly; 36 who had learned to write, 21 well and 15 moderately."

As to after life and employment, of 176 who had had seven years' training:

18 (10 per cent.), earning wages; 9 (5 per cent.), remuneratively employed at home; 6 (3.5 per cent.), capable of earning, parents state, if they could find suitable situations; 38 (22 per cent.), more or less useful in small domestic matters at home; 39 (22 per cent.), at home, of little or no use; 51 (29 per cent.), in asylums or work-houses; 15 (8.5 per cent.), died since leaving.²

SOME OF THE PSYCHICAL CHARACTERISTICS OF IDIOTS.

Sensibility and Touch. It is difficult to succeed in the ordinary experiment for determining tactile sensibility with idiots, because

¹Quoted by Ireland, p. 326.

²"The Feeble-Minded Child and Adult," p. 66.

it is impossible to rely upon their intellectual interpretation of what is wanted or what they experience. Apparently idiots do not suffer severely from injuries that would be very painful to a normal person. Angry idiots sometimes pound their heads against the wall or floor, bite themselves, scratch their faces or pull their hair with seeming indifference to the pain. Frequently, a child who is annoyed will strike itself a stinging blow on the mouth with its fist. Ireland tested certain members of his institution as to their sensibility to heat by immersing their hands in warm water. They always withdrew them before the water had become unpleasantly hot to an ordinary person. Dr. Ireland tells of a boy who bore a severe burn with nitric acid with indifference. He could also endure a powerful current of electricity without uneasiness, but could distinguish between coarse and smooth cloth by the feeling, and seemed normal as regards temperature.

Sometimes the tactile sense is keenest in parts of the body other than the fingers; for instance, some substitute head touch for hand touch. This may be especially noticeable in acts of caressing. When the hand is trained, the forehead loses its former power. Hyperæsthesia of the tactile sense is not uncommon, according to Seguin. "Some of our children," he says, "will be unable to touch anything but with the delicacy of the humming-bird, and seem to suffer greatly from any other mode of contact imposed upon their hands. The feet of others are so much affected with similar exaltation of sensibility that the thinnest shoes pain them, and the contact of the softest carpet or floor makes them recoil or advance as if they could not help it, and as if walking upon live coals."¹ Here might be noted those curious acts which are apparently induced by "sensation hunger," many of which are described further on. Some flicker their hands briskly before the eyes, intercepting the rays of light that enter them; others beat the head against the arms, rub the hands, suck their fingers until they are parboiled like the hands of a washerwoman, bite the wrists, and the like.

Sight. Impaired vision in idiots is not often due to imperfect

¹"On Idiocy," p. 59.

visual apparatus. Examinations have shown that the eyes of idiots are wonderfully free from defects. The trouble lies generally in the mental enfeeblement, whereby visual impressions are unattended to. Tambourini, Marselli and Benedekt¹ have noted frequent cases of flattening in the occipital region when there has been visual inability with perfect eyes. Some children are unable to learn from the sense of sight alone exact notions of form and dimensions of objects. Strabismus is frequent with idiots. Hypermetropia is very common with idiots and imbeciles, but myopia is very rare.¹

Hearing. Ireland notices a connection between idiocy and deafness. Deafness, he says, frequently occurs in families where some of the other members are idiots. As with sight, hearing may be defective even when the organ is perfect. In such cases the idiot may hear sounds that are of interest, but no others. Itard's boy did not hear the report of a pistol, but immediately turned to look when the key was placed in the lock of the door to his room, and would seek for the nut that was dropped upon the floor behind him. Some idiots who pay no heed to loud and unusual noises, when thirsty will seek for water which they hear poured near them.

Taste. The sense of taste is commonly deficient.² Ireland tested eighty idiots and found the sense of taste very deficient in twenty-two. Six more were defective in taste, but in a less degree. The worst tasting things are often eaten by them with indifference or even with pleasure. Some will eat soap, some have been known to enjoy the taste of turpentine, and some persist in eating garbage and filth of every kind. Medicine is no bugbear to these children. It is interesting to see the gusto with which they receive a spoonful of cod-liver oil. There seems to be an analogy here to the sense of touch or of pain, since a stimulus which would be positively painful to an ordinary person is received or self-inflicted by the idiot with manifest pleasure. Yet with this perversion of taste there is often, curiously enough, a choice as to the food on the table.

¹ "L'Idiotie," Paris, 1893, p. 122

² "On Idiocy and Imbecility," p. 259.

Smell. Taste is more often perverted than the sense of smell, but smell is oftener exalted.¹ Some children place everything to the nose rather than to the mouth. M. M., a girl, if given a piece of candy, prefers to smell of it rather than to taste it. A piece of evergreen is a source of constant delight to her.

It is very rare that the sense of smell guides idiots in the choice of food, though it sometimes happens. Voisin² gives the case of an idiot girl who would not drink from a glass in which there had been wine. Smell sometimes is wholly wanting. Voisin mentions also a girl who would smell of ammonia and cologne indifferently.

Attention. As was noted among the classifications of idiocy, Sollier makes attention the basis of his classification. He follows essentially Ribot's view.³ "Attention, whether strong or feeble, is always and everywhere dependent upon the affective state, and its manifestation is essentially motor, that is to say, it always acts upon the muscles chiefly in the form of inhibition. The movements of the face, the limbs, and the modifications of respiration are necessary conditions, the constitutional elements, the indispensable factors of attention. Given the motor power and the affective state and you have attention. If these two elements are altered, as in a case of idiots, one easily perceives the lesion of attention."⁴ As to the affective sentiments in general, Sollier says, "they are either wholly or partly wanting." As to the second factor, the motor element, it presents frequent anomalies, paralyses, contractures, convulsions, automatisms, etc. Weakness of the fundamental instincts, hunger, and the imperfection of sensation, weaken the power of attention.

Education consists almost exclusively in calling into play the voluntary attention; and Ribot distinguishes three periods in the formation of this attention:

1. Education has action only upon the simple sentiments: cruelty, egoistic tendency, attraction of reward, tender emotion and sympathy, curiosity, etc.

¹"On Idiocy," p. 61.

²"L'Idiotie," p. 134.

³"Psychologie de l'Attention." Paris, 1889.

⁴"Psychologie de l'Idiotie et l'Imbécile." Paris, 1895, pp. 66-67.

2. The attention is sustained and carried by the formation of secondary sentiments: love of property, emulation, ambition, interest, duty, etc.

3. The period of organization: attention is sustained and carried by habit.

Idiots in general are very deficient even at the first of these periods. With some idiots attention depends wholly upon sense of hunger or thirst, or some want. Association may be formed between certain things or acts and the feeling of satiety or relief. Attention, then, may be induced by sight of certain things, as food, for example.

STATISTICS.

The total number of persons living in the United States on the first day of June, 1890, and reported as feeble-minded or idiotic, was 95,571, of whom 52,940 were males and 42,631 were females; 84,997 were white, of whom 75,910 were native born and 9,087 were foreign born; 10,574 were colored, of whom 5,788 were males and 4,786 were females.¹

The following shows the increase from 1850. Total number of idiots in the United States:²

1890	1880	1870	1860	1850
95,571	76,895	14,485	11,080	9,149

The number of feeble-minded persons per 1,000,000 of population:

1890	1880	1870	1860	1850
1,526	1,533	636	602	681

In 1880 there were in institutions for the feeble-minded, 2,429.

In insane asylums and hospitals, 1,141.

The total number of feeble-minded persons in the public and private institutions of the United States, according to the report of the Commissioner of Education, 1891-1892, was 6,101. What is being done for the remaining 90,000?

The total number of persons returned as idiots or imbeciles for the census of 1881 for England and Wales was 32,717, or one

¹ "Compendium of the Eleventh Census," 1890, Part II, p. 133.

² "House Miscellaneous Documents," 2d Session, 47th Congress, 1882-1883, Vol. XIII, Part II.

such person for every 794 of the population.¹ For reasons which are enumerated in the report, these returns are far from trustworthy. A corrected estimate places the number at 41,940, which again, the report says, is doubtless too small.

We have seen that the training of idiots is a work of the present century, and that it was undertaken in the first place for a philosophical rather than a charitable purpose. The asylum today in its work of love should serve none the less as a laboratory for the solution of problems of universal import. Humanity is always best served when charity and science unite.

Statistics show that the number of feeble-minded persons is very large and that idiocy has increased. The number of institutions for the feeble-minded is very small.

Idiocy is due in the majority of cases to some hereditary taint, fault or ignorance of parents. There is great need of a better knowledge of heredity and of the hygiene of parenthood on the part of the people. A knowledge of institutions should be spread. Parents of feeble-minded children are naturally very reluctant to send their children to such institutions. If they could know more of the work of such schools, if they could see the progress made and the happiness which these children enjoy in a good institution, reluctance would be replaced by eagerness.

Seguin is the great pioneer and master in the education of idiots. The principle enunciated by Seguin in his physiological method, viz., that "the peripheral organs, the special senses, the cutaneous and muscular senses, must be carefully trained at the same time that the purely cerebral functions are developed by ordinary teaching," is a fundamental principle for a universal primary education, but unhappily too little appreciated. Every primary and kindergarten teacher should study Seguin.

[Continued in December number.]

¹"Census of England and Wales," 1881, Vol. IV. General Report, p. 68.

MINUTES OF THE ASSOCIATION.

TWENTY-FIRST SESSION.

The twenty-first session of the Association was called to order at 8:30 p. m. July 14, 1897, at Orillia, Ontario, Canada, by the President, M. W. Barr, M. D.

The minutes of the last meeting were read.

On motion it was voted to amend the minutes by the insertion of the name of Dr. W. A. Polglase, of Michigan, who was elected last year, but whose name had been accidentally omitted.

The following persons were elected to membership:

On motion of Mr. A. Johnson, Mr. L. C. Storrs, active; Mrs. Mary R. Harper and Miss F. A. Gile, honorary.

On motion of Dr. Barr, Dr. W. G. Spiller, of Pennsylvania; Messrs. Francis Taber, Grosvenor Dawe, honorary.

On motion of Dr. Carson, Mr. P. C. Garrett, of Pennsylvania; Mr. N. S. Rosenau, of New York, honorary.

On motion of Dr. Beaton, W. C. Herriman, of Hamilton, Ontario.

On motion of Dr. Rogers, Doctors J. W. Bailey, Minnesota; Wm. Spratling, New York; J. M. Murdoch, Pennsylvania; C. P. Fall, Nebraska; W. L. Athon, Illinois; Miss Mattie Gundry, Virginia, and Dr. John Stewart, of Kentucky, active; Mrs. Alexander Johnson, honorary.

The annual President's address was made by M. W. Barr, M. D., Elwyn, Pennsylvania. (See page 1).

A paper on the "Prevention of Idiocy" by Dr. S. J. Fort, was read by title.

On motion it was voted that the President should appoint committees on time and place, on nominations, and on publication. In accordance with this vote the following committees were appointed:

On time and place, Drs. Beaton, Polglase and Wilmarth.

On nominations, Drs. Carson, Dunlap and Knight.

On publication, Dr. Rogers, Mr. Johnson and Dr. Powell.

Mr. Alexander Johnson, Superintendent, Fort Wayne, Ind., discussed a "CAMPAIGN OF PROTECTION," as follows:

The necessity of protecting the States in which we live from the apparent increase of imbecility is plain. That the increase is as great as claimed is, I think, a mistake. The statistics are untrustworthy, at least in some of the states. In the decade from 1880 to 1890 there was an apparent increase of idiots and imbeciles in the state of Indiana, according to the United States census, of nearly eighty per cent. and an apparent decrease of seven per cent. of insane. At that time the number of insane in institutions belonging to the State who could be found and counted had increased almost fifty per cent. It is evident that in the census of 1890 a vast number of persons were classed as imbeciles who were classed as insane by the census before. Between the dement and the imbecile there is little difference except in the history of the case.

But though the figures are exaggerated there is no doubt that there is a great need of more care of this class, and something must be done to induce the States to take more active measures in regard to them. For the last four or five years most of us have agreed that the best plan of caring for them is in colonies which shall be branches of the main institution. The reason for that is an economical one. There is no occupation so suitable for the middle grade imbecile as the care of the low grade idiot. There they can be utilized better than in any other way. The question is, how largely that care can be extended.

It seems to me that it is about time that we organize something like a campaign on this subject. I think we want to take it up systematically; that we want to recognize more than we do the need of it. The difficulty under which we lie is that the general public is not aware of the facts. The people do not know the evils to be expected and they do not see how the matter can be attended to properly. It seems to me, therefore, that it is time we organized campaigns, each in his own state, and see if we cannot secure custodial care for all who should have it.

In order to do this we must show the public how we propose to do the duty. I am fond of taking ministers of different de-

nominations through my institution and showing them what we consider to be the civilized and enlightened way of caring for idiots and imbeciles, and they go away to carry that impression. That is one method of our campaign. I make it a rule to escort such guests through the institution myself. Of course, I do not refer to those who come from idle curiosity, but teachers, ministers and public men who are interested in the subject.

It is not open to us to make the tour of the State with a stereopticon—I wish it were—but we can use the most mighty engine for our campaign, the engine of the public press, the newspapers. I think it is our duty, recognizing as we do the great evils and the only possible solution, to get hold of our newspapers and to ply them with articles, not necessarily over our own name, that shall gradually arouse public sentiment throughout the State. One method I have thought of putting in practice is to establish a syndicate among the newspapers and write articles to be published simultaneously. I believe if we do this we should do it systematically. They should appear on regular days. Papers will publish a series of articles on given dates. Suppose you begin a series of articles to be published once a week in a dozen papers in the State, the people will look for them on those days and will read them. Have them short. Do not let them be over half a column long. Set a date when they may be released and give the editors time enough. Newspaper men like to keep ahead in copy. Such matter should be in their hands four or five days before it is to appear. Editors are quite willing to use syndicate copy if the article appears everywhere the same day.

If we do this then let us send copies of what we print to each other. If I have a series of articles in the Fort Wayne paper, for instance, I should send copies to every superintendent, every copy marked. Some of the material may possibly be useful for the JOURNAL OF PSYCHO-ASTHENICS, but as a rule what we want is not scientific matter, but readable matter, something illustrated by anecdotes and stories; or tell about your institutions and what you are doing there. Whatever you do have your matter interesting. Such work will help when you have to come before the legislature. If in this way we could get the public sentiment in favor of caring

for these classes properly, I believe, we should in a few years see a light dawning on the subject of crime, pauperism and drunkenness. It seems to me that the time has come for a campaign against the evils of degeneration that follow the neglect of idiots and imbeciles.

DISCUSSION.

Dr. Carson. Mr. Johnson may carry on that kind of a campaign in Indiana but I don't want to carry it on in New York. As it is, we are overwhelmed with applications. We cannot receive them and all our institutions are full. I believe in his idea, but he must have some mercy on superintendents.

Dr. Powell. If the public understood the need there would be an increase of capacity and more competent superintendents to take care of large numbers.

Mr. Johnson. What we want to do is to awaken the public conscience. I want to see custodial care in every State in the Union, and I know no other way of getting it done except by educating public opinion.

Mr. Clarence J. Snyder, Wisconsin. I think the future is bright in my own State. I do not think we shall have difficulty in raising money, but it is depressing to look at the condition in some States. There are so many institutions of all kinds, and it costs so much to keep them up, that I sometimes wonder what it is all coming to. Think of New York with its great criminal class! It does seem hopeless to think of enlarging institutions and doing the work with thoroughness.

The President. My institution at Elwyn has a capacity of 1,035 and I have four hundred applications that I cannot even consider. The appropriation cuts off the State children to 500, instead of 650. Mine is not a State institution. A governor of another State, with whom I had some discussion, told me that he had not the least bit of sympathy with imbeciles; that we looked at the matter from a sentimental point of view and that we expended time and money that would be better spent in other directions.

Mr. Storrs. I am in hearty sympathy with Mr. Johnson. As to State taxes they are a very small part of what is levied on

the people. When Dr. Polglase came before our Legislature and showed that he had six or seven hundred applicants that he could not admit, it had no effect whatever. But we must not find fault with the members of the Legislature. They do what they consider their constituents demand. But if Mr. Johnson's plan is carried out their constituents will demand that appropriations be made for this class. Then, in Michigan, there is a strong body of knights of labor, who dominate the Legislature. In a little school at Adrian, where there are three hundred girls under Mrs. Sickles, we had a hard fight with them. The Superintendent found that there was an industry in Adrian where straw braiding was required, and she obtained the industry of straw braiding for her girls, and it went on nicely till the delegates from the Labor Union put an end to it. Yet the work was so much needed for that particular industry that it was doubtful whether the manufacturer could continue in Adrian, because they could not otherwise get the work done there. You have got to educate the constituency of the Legislature before you can reach them. The stream will rise no higher than the fountain. The men in the Legislature represent the sentiment of the community from which they come, and the first work to be done is back of the Legislature among the people and to show them that these institutions must be taken care of.

Dr. Knight. I am heartily in accord with the opinions expressed as to acquiring increased capacity of institutions. But, I think, there is one part of the matter that has not been touched on. I like Mr. Johnson's plan, though it entails a great deal of hard work. One reason why States are rather loath to build large institutions is due to the fact that in many States too costly institutions have been built. I have had a little experience with Legislators and I find that they do not object so much to a new institution as they do to the per capita cost. We are improving in that respect in all of our States, and as we lessen the per capita cost the objections are growing less. Then, as we have to get our money through the Legislature, the quickest way is to "make yourself solid" with the State central committee men.

Dr. Powell. I think if the matter is presented properly, and the State knows that it is in the line of economy, that there will

not be many objections. The main object in having industrial labor is not economy, but because it is an absolute necessity for the benefit of those whom we have charge of. We could not dispense with it and carry on our work. We do not manufacture enough to compete with the outside public.

Adjourned at 10:30 p. m.

SECOND SESSION.

The second session met at ten o'clock Thursday forenoon. A paper on "The Curability of Juvenile Nervous Diseases," by A. W. Wilmarth, M. D., Wisconsin, was read by title.

A paper on "Abnormal Mouths of the Feeble-Minded," by M. E. LeGalley, Ft. Wayne, was read by Mr. Johnson, who said that for the past three months his institution had had a dental interne. He received twenty-five dollars a month and his board. Ten times as much filling is done as formerly and it costs no more, and in all ways the results are satisfactory. The interne provides his own instruments and the institution finds gold or amalgam for filling. The interne is sent by the dental college.

The paper was illustrated by a series of models of mouths in plaster of Paris.

Dr. Wilmarth was much interested in the paper, and thought Mr. Johnson and Mr. LeGalley had done good work in this direction.

A paper on "Epilepsy, its Relation to Toxic States," by Chas. Bock, M. D., Ft. Wayne, was read by Dr. Knight.

Mr. Johnson. For several years we have had a system of internship. There is a pretty good medical college in Fort Wayne, and by the end of the term there are always three or four of the class who want to be internes with us. Dr. Bock, who was the leading graduate last year, is now interne. It enables us to do a great deal of work that we should not otherwise do to have an interne. It gives the doctor more time. Our doctor has nothing to do with the commercial or educational part of the work, but only with the hygiene and the medical part. We have a good hospital, a well lighted operating room ready for use day or night; a dental room, a clinical room and a dispensary.

Dr. Rogers. I am glad Mr. Johnson has set the example in some of these medical lines.

In the study of toxic states in epileptics, during April, May and June, we have used hydronaphthol (betanaphthol) as an intestinal antiseptic in those cases of epilepsy where indican was present in the urine. The drug was given in three-grain enteric pills, one pill night and morning. No attempt was made to increase the dose. Neither was the urine examined for indican while the drug was exhibited as the dosage was so small no marked diminution in the presence of indican was expected. In addition to the hydronaphthol, once each week a mild laxative in the shape of the fluid extract of cascara sagrada was given, the dose depending on the individual. Twelve cases have been so treated. Three of these show improvement. In one of these there have been no seizures during the time of treatment. These were always associated with much gastro-intestinal disturbance. In the two others the number of seizures has been lessened, also the interval of recurrence. The enteric pill seems to be of decided advantage, as it undergoes no change in the stomach; hence the drug can produce no irritating effect nor lose any of its potency.

My assistant, Dr. Bailey, has managed this treatment, and while it has evidently been helpful, the fact of contemporaneous employment must be remembered. I think most of us are apt to overlook the fact that employment is the greatest remedial factor for epileptics that we have. We notice the difference in the seizures as soon as the boys get out to work. We have a garden just for them. Before the garden was begun we kept the boys busy at the woodpile. About eight of our boys cut and piled sixty cords of wood and as the woodpile went up the spasms decreased.

Mr. Snyder. One of our physicians at the insane hospital, (Dr. Gordon) has been bleeding for epilepsy. He told me that he had noted some favorable changes in cases treated in that way.

Dr. Powell. My assistant has had one or two cases in which he resorted to bleeding with very marked success, but we have resorted to it so seldom that we cannot report upon it.

Dr. Dunlap. It might be worth while to try it in very plethoric cases.

Dr. Rogers. The condition of the nervous system being the essential thing, anything that gives a shock to the nervous system will affect the general condition. An epileptic who has an acute sickness, such as typhoid fever, may go for months without a spasm. I have in mind a case where a boy who had been having hard and frequent seizures was sick for three months with pneumonia, and after his recovery he had no spasms for nine months. Some of the surgical operations on the cranium that have apparently improved the condition of the epileptic temporarily have probably operated in that way through the shock.

Dr. Wilmarth. The last point is well taken. The results of the new experiments last long enough to deceive us. But in adult epilepsy it is usually the old story ; in due time the spasms return.

Mr. Johnson. Bleeding has been resorted to in our institution about three times, and each time with apparently good results. But it seemed to me like reverting to the practice of our great-grandfathers.

Dr. Barr. Dr. Potts thinks he has found a specific in extract of horse nettle. He tried it in eight cases with exceedingly brilliant results. I tried it in twenty-four cases and almost wiped those twenty-four cases out of existence.

Dr. Rogers. The cases or the seizures?

Dr. Barr. Both. We were very much alarmed at the condition of our patients.

Mr. Johnson. We tried it in eight or ten selected cases but the results were negative.

Dr. Barr. We kept up the same regimen otherwise, and in four cases I never saw such violent seizures.

A paper by Dr. Lawrence Glover on "The Epileptic Child" was read by Dr. Wilmarth.

Dr. Powell. I would like to ask Dr. Wilmarth about his percentage of the estimated cures of epilepsy.

Dr. Wilmarth. I presume Dr. Powell refers to a statement that I have made with reference to infantile epilepsy. My figures were based on actual cases, records that we had at Elwyn, excluding all cases that were doubtful and cases where less than three paroxysms occurred. I think if three or four occur it shows that

the spasm habit exists. The large percentage of recoveries—50 per cent. in these cases is due to their youthful state. They really outgrow the spasm habit. In that age there is a great deal of hope. Very young children do recover, that is, the spasms cease. I do not think that an adult epileptic often recovers. But adult epileptics *do* recover. It is not scientific to say that when an epileptic recovers that it was not epilepsy, and when he does not, that it *was*. In epilepsy of childhood I have figures to show that fifty per cent. recovered and the spasms ceased before puberty.

Mr. Johnson. Have you any record of the subsequent history of those cases? I ask because we have so many cases beginning apparently at sixteen or eighteen or even later, and on going back we find a history of something like infantile convulsions. Is it not possible that some of those apparent recoveries may have lasted some years and the spasms come back again?

Dr. Wilmarth. If the spasms cease for a number of years I think we may say the patient has recovered. We can never take away the liability of the spasm recurring.

Mr. Johnson. If the cessation of spasms for twelve months is a recovery, we can show a history of many recoveries. One of our boys fell into the river and did not have a spasm for fourteen months.

Dr. Knight. I think Mr. Johnson loses sight of the fact that these are cases of infantile epilepsy. I fully agree with what Dr. Wilmarth says. Yet, while I believe that the convulsions of infancy and childhood belong to the one family of epileptoid disease, I think that the convulsions in teething and acute fevers are more or less symptomatic. Take the babies that have convulsions in teething, if they receive intelligent care, proper education and treatment as they grow, the large number get well and there is never a return of the spasms. The convulsions in little children with scarlet fever may be extreme, and while they do a great deal of harm, yet, in the greater per cent. of those who recover, the convulsions never return. And yet the per cent. of cases which we receive in our institutions and which give a history of scarlet fever would naturally give those convulsions with scarlet fever as a cause. Infantile convulsions are symptomatic, and if you cannot surround the child

with a proper environment and give it proper treatment, he is likely to acquire the convulsive habit and then it becomes a chronic condition. That is the way I look at this thing. I think it is proper in cases of infantile epilepsy if you carry them nine months or a year without spasms, to record them as recovered, as you would record the recovery of an insane patient who has ceased to have mania. A person who has recovered from insanity is as sound as you or I until certain circumstances arise. In six months or four years he may have another attack. When he does, you might as well say that he did not recover from his first attack as to say that a child who has gone a stated number of years without spasms did not recover from his attack of epilepsy.

Dr. Powell. Several years ago, when I was at Elwyn, I was talking with the junior Dr. Seguin about the cure of epilepsy. and he spoke of the absolute necessity of keeping patients under observation for two or three years, and perhaps longer, with treatment perhaps, until they shall pass into a safe period.

Mr. Johnson. It is a matter of great consequence to us that the public shall not get the idea that epilepsy is curable if it is not. It is a great question what to do with the degenerates, and if epilepsy is a curable disease we should not class the epileptic as a degenerate, and should not advocate permanent State care. If, on the contrary, it is not a curable disease, and we are to class the epileptic as a degenerate, we ought to take all possible care that he shall not pass down his infirmity to another generation and that he should be segregated. If the impression goes out that fifty per cent. of epileptics can be cured it would be a serious matter. Dr. Wilmarth entirely satisfies me by saying that he refers to infantile epileptics.

Dr. Knight. I think it is proper that the question of the curability of epilepsy should be kept right before the public all the time. There is no question about the curability of epilepsy. Epilepsy *is* curable. We have the epileptic insane and those cases are always cared for by the public through fear. They cannot get a commission of doctors quick enough to commit such a person, especially when they think it is an attack of insanity. That class is not a menace to the public safety, because they are cared for in

ordinary insane asylums. The next class is harmless, and incurable. They are mostly in institutions and almshouses. The third class we must take care of. That is the class that should be provided for, because they will be most harmful to the public if allowed to go at large. This matter should be kept right before the public all the while.

Dr. Barr. Between the ages of fifteen and twenty, without any apparent cause, children, imbecile children also, develop epilepsy. Dr. Knight says there is no question about epilepsy being curable. I do not believe that epilepsy is curable. I think there is but one class of epilepsy, and I think no power on earth could convince me that it is curable.

Dr. Rogers read some figures with reference to infantile convulsions in Minnesota, as published by Dr. Bailey in the March JOURNAL OF PSYCHO-ASTHENICS, showing that of all the cases which have a history of convulsions in infancy, 20 per cent. exhibited no recurrence; 8.4 exhibited recurrence in from two to eighteen years, and 71 per cent. showed a history of permanent epilepsy.¹

Dr. Barr. When a child is brought to me for my opinion I say to the parents that we may ameliorate the child's condition to a certain point, but I do not take the responsibility of telling him that he may be cured. I know that he may die in convulsions. It has been my experience that epileptics do die without the slightest warning. In a number of cases we have found them dead.

Dr. Powell. I have been in the habit of making the same statement to parents. I have not been thoroughly convinced otherwise yet.

Dr. Knight. So have I, because in the greater percentage of cases they have organic heart disease.

Dr. Carson. What does Dr. Knight mean by the curability of epilepsy? If it is curable such persons as are cured should be permitted to go out into the world and be given in marriage. I should like to know if he would recommend them to marry?

Dr. Knight. No. If you are able to cure one case and follow it for a great many years and the epilepsy never recurs you are safe in saying that epilepsy *can* be cured. I don't mean that you

¹ "Latent Tendency to Convulsions after a Primary Attack," Vol. I, page 73.

are going to cure epilepsy right along. You have a great many cases of disease and some cases get well. I don't know whether you cure them or not, but they get well; the other cases do not. I claim that epilepsy is curable too.

Dr. Wilmarth. I think you cannot claim that it is cured unless there is no possibility of its coming back.

Mr. P. C. Garrett. If there is in the disease an inherent tendency to recurrence that does not belong to other diseases can you say that it is cured?

Dr. Knight. Epilepsy is just as curable as insanity.

Mr. Garrett. If there is a greater tendency to recurrence than in other diseases it can hardly be considered a curable disease with reference to marriage.

Dr. Carson. I have seen a great many cases of insanity, and I have seen many insane persons recover, and they remained in mental health through the rest of their days. I have never seen a confirmed epileptic that I considered recovered, never one.

Dr. Knight. I will take you to Minnesota and show you one. And I will take you to Connecticut and show you several.

Dr. Carson. That may be, but I have never seen one.

Dr. Polglase. I believe acute cases have been cured.

A paper on Heredity was read by Dr. Carson.

Dr. Barr. Dr. Carson speaks of consanguinity. In Brittany for five hundred years cousins have intermarried and imbecility is unknown. If the blood be pure then the children are pure and bright. Whatever the peculiarities they are intensified in the offspring. Dr. Kerlin found only three per cent. of the cases that he examined who were imbeciles as the progeny of consanguineous marriages.

A paper entitled "Number Work," by Miss Cora E. Wood, of Orange, N. J., was read by Mrs. Knight. (Page 22)

A paper entitled "Things We Do and Would Like to Do in School," by Mr. E. R. Johnston, was read by Mrs. Johnson.

Adjourned at 12:30 p. m.

THIRD SESSION.

The third session was held Friday morning at 10 o'clock, Dr. Barr in the chair.

A paper by Miss Bancroft, of Haddonfield, on "Can we Teach a Backward Child to Speak, etc." was read by Miss Gundry.

DISCUSSION.

Dr. Barr.—I am very skeptical about teaching these children to speak. They do not speak correctly because they do not do other things correctly. You can improve them a little but the improvement is not marked. I hope Miss Bancroft may find the key to this work.

Dr. Powell read a letter from Dr. Ireland, of Scotland, with reference to a new edition of his work on Idiocy and Imbecility, and asking for subscriptions.

After some discussion it was voted that Dr. Powell should be authorized in the name of the Association to subscribe for one hundred copies, to be taken by the different members as they should decide.

Dr. Rogers also spoke in praise of Dr. Shuttleworth's book called "Mentally Deficient Children."

Dr. Barr said that Fletcher Beach had issued a good little book, which could be read in two or three hours.

The Secretary reported the receipt of letters from Doctors Stewart, Doren, Fernald, Osborne, Fort and Salmon regretting their enforced absence from the meeting.

Papers were read by title as follows: "A Class In Advanced Kindergarten," by Miss Cornelia E. Duel, Syracuse, N. Y.; "An Advanced Class in Articulation," by Miss Mary M. Raine, Haddonfield, N. J.; "Report in Russian System of Work," by Miss Thyrsa C. Williams, Haddonfield, N. J.

The committee on time and place reported Haddonfield as the place for the next meeting, to be held in June, probably.

After some discussion the report was referred back to the committee to reconsider the invitation to Vineland, the claims of which had not been fully laid before the committee.

The committee on time and place then brought in another report, thanking Miss Bancroft for her invitation but recommending as the final result of their consideration that the next meeting

of the Association be held with Dr. Dunlap in Vineland, New Jersey.

The report was adopted unanimously.

The report of the Treasurer was made as follows:

TREASURER'S REPORT.

CASH DR.

Bal. on hand (Vol. 2, page 615) -----	\$ 33.54
To cash—Dues '95-----	91.50
“ “ — “ '96-----	90.00
“ “ — “ '97-----	11.00
“ “ —Sale proceedings -----	35.05
“ “ —Decen. Vol. I -----	9.00
“ “ — “ “ II -----	51.75
“ “ —Journal etc.-----	80.53
	<hr/>
	\$402.37

CASH CR.

By printing and stationery -----	\$293.86
“ engraving -----	26.74
“ binding -----	45.00
“ postage, exch'g, etc.-----	1.76
Bal. on hand-----	35.01
	<hr/>
	\$402.37

Vouchers filed for all expenditures.

On motion of Dr. Knight the report of the treasurer was accepted.

The committee on organization reported the following names as officers for the coming year: For President, Dr. George Brown, Barre, Mass.; Vice President, Dr. Dunlap; Secretary and Treasurer, Dr. A. C. Rogers; for official reporter, Mrs. Isabel C. Barrows.

The report was unanimously adopted and those persons were declared elected.

The committee on publication reported through Dr. Rogers as follows:

Your committee recommend as follows:

1. That the Association formally approve of the publication of the JOURNAL OF PSYCHO-ASTHENICS as its official organ.

2. That an editorial staff, consisting of an editor-in-chief and

four associates be appointed by the Association from its active membership, to have entire charge of the publication of said journal.

A. C. ROGERS.

ALEXANDER JOHNSON.

F. M. POWELL.

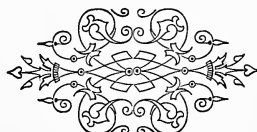
A brief discussion followed as to the name of the new journal, THE JOURNAL OF PSYCHO-ASTHENICS, after which it was moved by Dr. Knight that an editorial staff should be elected. Voted.

On motion Dr. A. C. Rogers was elected editor-in-chief, with Doctors Fernald, Powell, Wilmarth and Barr as associates.

A hearty vote of thanks to Dr. Beaton and his family, and to all connected with the institution at Orillia, was passed and the Association adjourned *sine die*.

Jean Paul once said, he would like to be wind or an insect by which the pollen of friendship is carried between kindred calyxes. Should you not have the same wish with regard to the children who surround you, and the many co-workers who stand at your side? But, alas, how often one finds that number three makes it his duty to separate number one from number two. The true pollen consists in that love which covers the sins of the multitude, makes no bad report, turns everything to the best account and is not self-seeking.

Translated from the German of Dr. Sengelmann for the Journal of Psycho-Asthenics.



The Journal of Psycho-Asthenics.

VOL. II.

SEPTEMBER, 1897.

NO. 1.

A quarterly journal devoted to the education and care of the Feeble-Minded, and the care and treatment of Epileptics. Published under the auspices of the Association of Officers of American Institutions for Feeble-Minded.

EDITOR-IN-CHIEF:

A. C. ROGERS, M. D., - - - Faribault, Minn.

ASSOCIATES:

W. E. FERNALD, M. D., - - - Waverly, Mass.
A. W. WILMARTH, M. D., - - - Chippewa Falls, Wis.
F. M. POWELL, M. D., - - - Glenwood, Iowa.
M. W. BARR, - - - Elwyn, Pa.

Address: JOURNAL OF PSYCHO-ASTHENICS, Faribault, Minn.

(Entered at the Postoffice at Faribault, Rice Co., Minn., as second class matter.)

EDITORIAL.

AS OTHERS SEE US.

The October number of the *Altruist* contains the following:

"We are forced to criticise somewhat the character of the annual meetings of the 'Superintendents of Institutions for the Care of the Feeble-Minded.' At Orillia, Ont., this summer, far too much attention was given to confirming each other in beliefs already held as to the bane of feeble-mindedness in the community, but scarcely a word of practical advice was given as to the methods of arousing public alarm and then directing it into legislative action. Our suggestion to these workers in a momentous cause is to permit their next annual meeting to pass without piling Pelion on Ossa in the way of 'horrible examples,' whereat only their own hands are raised in alarm, and to devote the time to the formulation of broad plans for a national crusade. This is surely the direction of the greatest need, when out of 150,000 feeble-minded people only 6,000 are safely housed away from harm and impotent for harm."

We will not say that the first part of the criticism is not just, but to pile up "horrible examples" at the meetings would certain-

ly not relieve the latter of the first mentioned cause of criticism. The members of the Association have always recognized the importance of educating the public to appreciate the necessity of enlarging the work for the care of the feeble-minded, and later of epileptics, but this is a *secondary* function of the Association. Its purpose as stated in the constitution is "the discussion of all questions relating to the causes, conditions and statistics of idiocy, and *to the management, training, and education of idiots and feeble-minded persons; it will also lend its influence to the establishment and fostering of institutions for this purpose.*"

Since the National Conference of Charities and Correction in 1884 assigned a section to our work, this section has by common consent been accepted and utilized for bringing our work before the public in a systematic way.

The active members of the Association to-day are mostly either officers of large and growing public institutions, with difficult administrative and technical problems to solve, or are teachers or medical officers of private schools, and both classes are anxious to develop the best methods for conducting their work. Our institutions must be so organized and administered that the best possible results can be obtained for the least expense. This is not only demanded by a conscientious regard for duty, but it is absolutely necessary to successfully ingratiate our work into public confidence in new states. This is not an age in which sentiment only justifies to the public the establishment of institutions that must be perpetual. It must be a demonstrable fact that our institutions produce the results claimed, and they must be "shining examples" to which the propagandist can point with increasing confidence. The suggestion that we would offer, then, for improving the meetings of the Association, are, that every member should make it his religious duty to attend every meeting and to frankly present for consideration and discussion the problems that give him the greatest trouble, and present with equal frankness papers or discussions that will bring out his experience along the various lines of work.

The extension of our work will depend more upon the *kind* of *institutions* we are building than any forensic advertising.

STUDIES OF THE THYROID.

The increasing investigations concerning the functions of the thyroid gland are of special interest to all who have the care of feeble-minded children, not only because of the occasional cretin coming under their care, but because of the "Mongolian" or "Kalmic" cases that form from two to four per cent. of the population of all American institutions for Feeble-Minded. It has already been demonstrated that the thyroid treatment applied to "Mongolians" quickly affects their nutrition very much as it does that of cretins. We hope to hear soon the results of the investigations now being made along these lines, especially as to the difference, if any, in susceptibility to mental development resulting from the thyroid treatment.

DESEXUALIZATION.

The annual address of President Barr at the Orillia meeting of the Association, and which forms the opening article of this number of the *Journal*, presents a subject that cannot be ignored. There has been for some time a growing feeling among physicians founded upon physiological or rather pathological facts, that sentiment can be tempered by a little good sense without in the least lowering our ideals of humane treatment of certain of our cases. This sentiment has been strengthened by the inquiries that all progressive philanthropists are making as to improved methods of dealing with the defective and delinquent classes. There are cases known to all who have had much to do with epileptic and feeble-minded young, whose lives would be or would have been much more satisfactory to themselves and others had surgical interference come to their relief, to say nothing of the lessened anxiety and expense their care would thus have entailed. This is a movement in which it is wise to make haste slowly, but the profession should not shirk its plain responsibility in assisting to shape legislation which, while permitting desexualization, shall hedge the operation by suitable safeguards from abuse.

A paper presented at the Section on State Medicine of the American Medical Association, by Dr. Everett Flood, of Baldwinsville, Mass., giving the result of a study of twenty six cases, presents some interesting and encouraging facts.

NOTES AND ABSTRACTS.

From the July number of *Zeitschrift für Behandlung Schwachsinniger und Epileptischer*, we learn the following:

At the international congress held at Munich, July, 1897, A. Marro, from Turin, Italy, spoke upon the influence of the age of parents upon the psychophysical condition of children. It is not a matter of indifference for the physical condition of an individual whether he descends from parents who at the time of his procreation were at the most vigorous age in life or were at that time too young or too old. For example, Marro could establish the fact that among criminals and still more among the feeble-minded, not only were those found who were procreated by parents too young or too old, but this number was relatively much larger among criminals and feeble-minded than among normal persons. In the form of crime, striking peculiarities were shown according to the age of the procreators. With the children of too young parents the offences against property preponderated, and also the violation of laws, which violations are a consequence of ungoverned passions, of belligerency and love adventures. On the other hand, criminals against life descend from parents in advanced age. At the same time the striking observation was made, that the decrepitude of the father was more prejudicial than that of the mother. The advanced age of the father predisposes to moral folly, insanity at puberty, functional insanity, epilepsy and paralysis. Also, among school children, certain indications were found showing that those children procreated by too young or too old parents, during the period of development made the poorest progress. Further, sixty-six per cent. of the sons and daughters of old fathers show striking peculiarities of character.

ALCOVE BEDS FOR EPILEPTICS.

Dr. Everett Blood suggests in a paper published in the *Journal of the American Medical Association* for Oct. 23, the construction of alcoves for the beds of epileptics, just wide enough for the bed to slip in comfortably. The idea is to have the walls serve as deadening for sound as well as sides for the bed. Each alcove to be ventilated separately.

LEGISLATION—1896-97.

(So far as reports have been received.)

CALIFORNIA.

THE HOME AT ELDRIDGE.—Appropriation, \$160,000 for 2 years, for maintenance. A new act was passed by the legislature, opening the institution to all grades of idiocy and imbecility, to epileptics and paralytics; removing age limitations and providing for the life care of those requiring it. Counties from which persons are received are required to pay \$10 per month for their care. The Home is also permitted to receive cases without county commitment upon special payment—charges to be regulated by the Home.

COLORADO

Made a move for an institution for feeble-minded at the last session of its legislature and three different bills for that purpose were introduced, all practically the same, except as to location. Neither of them was finally successful.

INDIANA.

THE SCHOOL AT FORT WAYNE.—The legislature increased the appropriation for maintenance about 10%, and \$2,500 for improvements. With the latter a brick yard has been equipped and Supt. Johnson says it is proposed to ask for appropriation later to put into buildings the 300,000 brick they propose to make.

KANSAS.

APPROPRIATIONS.—For salaries and wages, \$8,570; for maintenance and repairs, \$12,000; new cottage, \$35,000; new boiler house, \$15,000; additional water supply, \$500.

IN MICHIGAN

A bill was introduced into the legislature that contemplated desexualization of the inmates of the school for feeble-minded and certain criminals. The bill gave rise to much discussion but failed of passage.

MASSACHUSETTS.

APPROPRIATIONS MADE FOR THE SCHOOL AT WAVERLY.—1st annual appropriation, \$25,000; 2d, special appropriation for furnishing two new buildings, \$5,000; 3d, appropriation for the purpose of purchasing a large tract of land for establishing a farm for the graduates of the school department, \$20,000.

MICHIGAN,

FOR THE HOME AT LAPEER.—New buildings, \$41,500; maintenance, two years, \$77,000.

MINNESOTA.

SCHOOL FOR FEEBLE-MINDED, FARIBAULT.—Current expenses, each of two years, \$105,000; cottage for epileptics, cold storage, dynamo and electric work, remodeling and adding to training rooms, \$43,500; stock barn, \$3,500; extraordinary repairs, each of two years, \$2,500.

MISSOURI

Made an effort in the same direction as Colorado, but other interests deprived it of the necessary attention and support.

NEBRASKA.

INSTITUTION FOR FEEBLE-MINDED YOUTH, AT BEATRICE.—Employes' wages, \$12,000; maintenance and living expenses, \$30,000; furniture and bedding, \$500; fuel and lights, \$9,000; farm supplies, \$250; office supplies, \$250; library and periodicals, \$100; school and industrial supplies, \$200; amusements, \$200; medicine and surgical instruments, \$600; repairs and improvements, including repairs to boiler, \$2,000; incidentals, \$200; tools, \$100; laundry apparatus, \$500; cooking apparatus, \$300; paints and oils, \$200; improvement of grounds, \$100; radiator guards, \$300; water supply for institution, \$7,000. General appropriation, officers and teachers salary, \$13,600.

NEW YORK.

APPROPRIATIONS.—FOR THE SCHOOL AT SYRACUSE.—Maintenance, \$75,000; extension and improvement of steam heating, \$3,875; fencing and hennery, \$2,000; new corridor, (bal.) \$826.08.

FOR THE CUSTODIAL ASYLUM AT NEWARK.—Maintenance, \$50,000; improving power plant, \$20,000; grading and improving grounds, \$2,500; ventilation and betterments, \$2,500; ice house, \$600; repairing gardener's house, \$1,000; sewerage, (re-appropriated) \$1,699.72.

FOR THE CUSTODIAL ASYLUM AT ROME.—Administration building, \$25,000, building for kitchen, dining rooms, cold storage, etc., \$55,000; heating and ventilating, \$14,000; painting and repairs, \$2,500; machinery, \$1,000; medical and surgical appliances, \$300; farm stock and utensils, \$1,500; musical instruments, etc., \$500; fire apparatus, \$500; furniture, \$1,000.

CRAIG COLONY FOR EPILEPTICS.—Dormitory buildings, \$40,000; administrative building, \$30,000; furnishing, \$12,000; extension of water and sewerage systems, \$5,000; six tenant houses, \$5,000; slaughter house, \$1,000; piggery, \$1,200; hennery, \$1,200; granary, \$2,000; blacksmith shop, \$1,000; two horse stables, \$3,000; plumbing and heating west group, \$5,200; plumbing, heating and ventilating hospital building, \$5,000; nursery, forcing beds, roadways, walks and grading grounds, \$2,500; industries, including a two-story brick building, \$5,000; laundry machinery, \$750; general repairs and improvements, including sheds for sheep and cattle, fencing, moving buildings, painting barns and outhouses, increasing storage capacity for coal, improving creek water supply and increasing spring water supply, \$6,750.

OHIO.

HOSPITAL FOR EPILEPTICS AT GALLIPOLIS.—Construction, (1895-6-7) \$235,000; current expenses, \$94,000; ordinary repairs, \$12,000; fittings, \$5,000; officers' salaries, \$5,900; land, \$5,000; transportation, \$2,500.

PENNSYLVANIA.

FOR THE SCHOOL AT ELWYN.—Maintenance for two years, \$192,500.

FOR THE WESTERN PENNSYLVANIA INSTITUTE AT POLK.—Furnishing and equipping barns, and purchasing harness and vehicles, farm utensils, stock, etc., \$6,000; cold storage, \$1,000; fitting up school buildings, \$1,800; fitting up industrial school buildings, \$800; fixtures for boilers and engine room and machine shop equipments, \$2,000; grading and beautifying the grounds,

building walks, drives, bridge and dam for ice pond, \$6,000; planting fruit trees, shrubs, etc., \$2,000; erecting pig pens and henneries, etc., \$2,000; plumbing and fittings for fire apparatus, attachments, hose, reels, etc., \$1,000; clocks, time detectors, telephones and electric apparatus, \$2,500; concreting cellar floors under all buildings, \$3,500; construction of coal shed, \$1,200; construction of railroad switch into the same, \$500; ice house, \$1,000; water tank for an emergency supply of water for boilers, \$500; fencing of the grounds, \$3,000; office fixtures, books, etc., surgical instruments, furniture, the payment of trustees' expenses, architects' commissions, superintendent's salary, salaries for help for cleaning of buildings and caring for them until occupancy, placing fixtures and furniture in position, etc., \$8,000; expenses of removal of children from the institution at Elwyn, and for maintenance, \$10,000; total, \$52,800. Maintenance, \$161,500 for two years, to be drawn at the rate of \$190.00 per annum per capita.

VIRGINIA.

A resolution was agreed to by the general assembly in March, 1896, appointing a committee to look into the question of state care of epileptics on the colony plan. The committee consisted of Senator Geo. W. LeCato, Delegates, W. P. McRae, C. E. Vaute, of the Miller Manual School, Dr. E. M. Magrader, Dr. W. F. Drewry, Supt. of Central Hospital, and J. Bell Bigger, Clerk of the House of Delegates, as its Secretary. They visited the Craig Colony at Sonyea, N. Y., and the Ohio Hospital for Epileptics at Gallipolis, Ohio, in May, 1897. The committee will make a report to the General Assembly at its session beginning on the first Wednesday in December.

WEST VIRGINIA.

The last legislature of the state passed an act for the establishment of a "Home for Incurables" and the question has been raised whether it should admit Idiots. Ten thousand dollars was appropriated for its use.

WISCONSIN.

Appropriations, for maintenance, \$62,500; for furnishing, \$15,000; for buildings, \$75,000.

Journal of Psycho-Asthenics.

Devoted to the

CARE, TRAINING AND TREATMENT OF THE FEEBLE-MINDED
AND OF THE EPILEPTIC.

Vol. II.

DECEMBER, 1897.

No. 2.

Published Quarterly at Faribault, Minnesota.

SUBSCRIPTION, \$1.00 PER ANNUM.

SINGLE COPIES, 30 CTS.

Entered at the Post-office at Faribault, Rice Co., Minn.,
as second class matter.

THE JOURNAL OF PSYCHO-ASTHENICS.

The only periodical in the English language of general circulation devoted exclusively to the interests of the FEEBLE-MINDED and of EPILEPTICS. Published under the auspices of the Association of American Institutions for Feeble-Minded. OFFICERS: Geo. Brown, M. D., Prest., Barre, Mass.; Mary Dunlap, M. D. Vice Prest., Vineland, N. J.; A. C. Rogers, M. D., Secy. and Treas., Faribault, Minn.; Mrs. Isabel Barrows, Boston, Mass., Official Stenographer.

Subscription \$1.00 per annum; single copies 30c. *Special rates for re-prints and quantities of any one issue for distribution.* Address communications to The JOURNAL OF PSYCHO-ASTHENICS, or to Dr. A. C. Rogers, Faribault, Minn.

CONTENTS FOR DECEMBER, 1897.

ORIGINAL ARTICLES:—

- Teeth and Jaws of the Feeble-Minded—M. E. LeGalley,
D. D. S.-----55
A Class in Advanced Kindergarten—Cornelia E. Deuel,-----60
A Study in Wood Work—Thyrza C. Williams,-----62

SELECTED:—

- Contribution to the Psychology of Feeble-Minded Children—G. E. Johnson,-----63

EDITORIAL:—

- Is the Care of the Feeble-Minded a Hopeless Work?-----82
Death of Dr. J. Q. A. Stewart -----84
A New History of the Care of Epileptics in America-----84
“Bibliography of Education”-----85
Maryland Training School-----85
Iowa Legislators-----85

NOTES AND ABSTRACTS:—

- “Imbecility as an Element in Insanity”-----86
“What is Being Done for the Development of Backward Children in Italy”-----88
A Conference of Teachers of Auxiliary Schools for Backward Children-----89
Illinois State Conference of Charities and Correction-----90

Journal of Psycho-Asthenics.

VOL. II.

DECEMBER, 1897.

NO. 2.

ORIGINAL ARTICLES.

TEETH AND JAWS OF THE FEEBLE-MINDED.

M. E. LE GALLEY, D. D. S.

Observations made at the I. S. F. M. Y., Ft. Wayne, Ind.

This paper is based on the results of the examination of 250 boys, ranging from the ages of 6 to 25 years. I shall not attempt to give the details of each case, nor the probable causes leading to the conditions found, but shall merely review some of the most marked cases which have come under my observation.

In classifying irregularities, authorities differ not only as to manner of division, but as to probable causes leading to existing conditions. There are often such slight differences or shades of differences as to make it almost impossible to properly classify each case without the aid of instruments for measuring the height of vault, width of anterior and posterior regions and determining these relations to the adjoining parts.

As I have made no actual measurements, and in many cases there is extreme difficulty in making close observations on account of the unwillingness of the patient to allow examination, I have only noted those cases which could be easily determined by the eye, or from which models could be made. For convenience I have taken the divisions given by Talbot, who classifies irregularities into two divisions and then sub-divides each of these.

1st. The V-shaped arch, a form of irregularity in which the interior teeth form a V or modification of it, instead of being elliptical. Cases in which this form of irregularity exists only on one side are termed semi-V, and those not very noticeably of this form

are called partially V-shaped. The V-shaped deformity and its modification are found frequently in ordinary practice, and can hardly be classed as one of the marked features of degeneracy, i. e., of themselves they would not indicate degeneracy, though they are oftener found in degenerates. This deformity is usually accompanied with a high, narrow vault, and frequently with a vicious eruption of the teeth. The second class is the *saddle shaped* arch or its modifications, *semi-saddle* or *partial saddle-shaped arches*. This form has reference to the posterior teeth, the bicuspid or premolars approximating the median line, thus lessening the width of the vault in the bicuspid region. When only one side is affected, this is termed a semi-saddle shaped arch, or when not very distinct, partial saddle shaped. This form of irregularity is very seldom found except in cases of degeneracy, and can in most cases be recognized as one of the features of such degenerates, especially when accompanied with a high vault.

Model No. 8. G. W. Shows a typical case of saddle-shaped arch. The manner of occlusion also points directly to a low degree of intelligence, there being no occlusion whatever in the anterior teeth. The subject from which it was taken possesses no intelligence, carries his mouth open, makes no attempt to control or throw off excess of saliva, and is in short a low type of idiot. So typical a model as this is seldom found except in cases of very low intelligence, though modified forms of this type are seen in some instances of the higher grades of imbeciles.

Model No. 1. D. C. Large, Hypertrophy of the anterior alveolar process, carrying the incisors with it, leaving them far apart and centrals slightly turned on axis. A mouth breather, and carries the mouth open most of the time. Also stutters and stammers in talking. This boy is a middle grade imbecile. No family history of degeneration, and no known or supposed cause for feeble-mindedness.

Model No. 2. F. M. A V-shaped arch, narrow vault; lateral incisors were erupted inside of the arch, but have been extracted; occlusion good. This boy is a middle grade imbecile. Some history of epilepsy in the family. Father died of consumption. Both parents somewhat feeble-minded.

Model No. 3. J. K. Saddle shaped arch. Right side of the arch more contracted than the left. The median line like many other parts of this patient's body contorted. The occlusion is square. Vault a little high. Patient has curvature of the spine. High grade imbecile. Belongs to a very degenerate family, mostly paupers or petty criminals.

Model No. 4. D. M. Shows a saddle shaped arch as well as a protruding under jaw, (Prognathis). The conditions in this case are probably due to arrested development of the superior maxilla. Other bones of the face also not fully developed, and patient is blind. Middle grade imbecile. No known or supposed cause for feeble-mindedness, and no degenerate family history.

Model No. 5. A. S. Shows a V-shaped arch. It might be classed as a partial V-shaped. A normal vault and the occlusion a square bite. Of negro ancestry, though very little of it is shown in general appearance. Idiot, hemiplegic, epileptic. Family history of scrofula and cancer. Mother a degenerate with some feeble-mindedness in the family. Father very dissipated.

Model No. 6. I. W. Shows a semi-V shaped arch with vicious eruption of the anterior teeth on the right side, the lateral being inside of the arch and turned on axis. Cuspid and right central crowded out and forward. Vault normal high, some of permanent teeth missing, and lateral incisors below, crowded inside of arch. Middle grade imbecile. No known or supposed cause. Father dissipated. No bad family history except dissipation on paternal side, including grand-parents.

Model No. 7. J. McC. Shows a protruding upper maxilla, cause hypertrophy of the alveolar process. The entire alveolar wall pushing forward and carrying with it the four incisors. The lower arch semi-saddle shaped. Vault normal high. Middle grade imbecile. No known vicious history, but parents and grand-parents were second consins.

Model No. 8. G. W. (Given above.) Nothing known of ancestry, nor cause. Low grade idiot.

Model No. 9. A. W. Shows a high, narrow vault. Idiot, with lateral curvature of the spine. Alleged cause, fright during pregnancy. No history.

Model No. 10. J. H. Shows a protruding under jaw (Prognathism), with a low flat vault. Low grade imbecile. Mouth so deformed as to interfere with speech. No known or supposed cause. Family history of dissipation, cancer, some intermarriage with relatives.

Model No. 11. F. B. Shows a complete set of temporary teeth, with the first permanent molars just erupted, nearly normal in every way, excepting the tardy eruption of the permanent teeth, the patient being seven years old. Middle grade imbecile. Nothing known before he arrived in the school.

Model No. 12. L. Y. Shows the first bicuspid below, outside of the arch. The eruption of second bicuspid above will make the arch crowded. First bicuspid turned on axis. High grade imbecile. Nothing known of history.

Model No. 13. M. S. Shows a V-shaped arch with vicious eruption of teeth above and below. Above centrals turned on axis, one lateral incisor outside and one inside of arch. Permanent cuspids not yet erupted. Middle grade imbecile. History of infantile spasms and parental dissipation. Probably no other cause.

Model No. 14. E. O. Shows a V-shaped arch. Right lateral incisor inside and left missing, vault narrow. Below cuspids outside of arch and incisors overlapping. Anterior teeth above protrude forward very much. Speech and articulation of words are not plain. High grade imbecile. Both parents and both paternal grandparents were feeble-minded. History of paralysis in the family. This is one of the brightest girls in the institution and shows very little sign of degeneracy, except nervousness, but her family history is such that there can be no question of her proper place in the institution.

Model No. 15. L. W. Shows a high vault and partial V-shaped arch. Lateral incisors above, both inside of arch and central incisors overlapping. Normal position of teeth below. Patient is tongue-tied. Hemiplegic. Middle grade imbecile. Family history of insanity.

Model No. 16. Mt. T. Shows a combined V and saddle shaped arch. Lateral incisors out of arch. Vault narrow. Occlusion abnormal and upper maxilla protrudes forward. High grade imbecile. No history.

Model No. 17. A. L. Saddle shaped arch, but most of posterior teeth missing, and no occlusion of teeth in the posterior part of the mouth. The lower jaw protrudes forward (Prognathis). A high, narrow vault. Middle grade imbecile. No history.

Model No. 18. H. L. Shows a nearly normal mouth in every way, excepting the absence of the second right molar below. Middle grade imbecile. Hemiplegic, epileptic. History of dissipation of the father. Father died of paralysis, mother of heart disease. No other family history.

Model No. 19. C. W. Shows a narrow high vault with contracted arch above and below. Below, the cuspids are outside of the arch and the incisors overlapping. The patient has difficulty in articulation. Does not talk plainly. High grade imbecile. Family history of epilepsy on mother's side, and scrofula and dissipation on the father's side.

The following table shows the relative position of jaws and the condition of the vaults and arches of those examined :

Normal size of position of jaws.....	220
Abnormal position or large jaws.....	30
Protruding upper jaw.....	4
Protruding under jaw.....	3
Vaults, normal high or wide.....	197
Vaults, high and narrow.....	20
Vaults, low and wide.....	4
Arches V-shaped.....	17
Arches semi-V shaped.....	1
Arches saddle shaped.....	4
Arches partial saddle shaped.....	4
Arches semi-saddle shaped.....	3

Although the teeth of the children in this institution are cleansed daily with brush and tooth wash, the rapid accumulation of tartar in those of low vitality is very noticeable. In some cases the deposit entirely covers the teeth and can only be removed by the aid of instruments. Tartar on the teeth aids materially in the accumulation of food around the teeth and in the approximal spaces. This soon becomes fetid, and can but deteriorate the general health of the individual. The tartar thus formed also infringes on the gums at the cervical margins of the teeth, inflaming them, destroys the alveolar process, which soon in turn allows them to loosen, become irregular or finally drop out altogether. These conditions are avoided or much benefited when they

exist, and the use of teeth in this condition greatly prolonged by the yearly examination and removal of the deposits left on the teeth. That the general health of the individual is also promoted is evident to any one who has noted with what rapidity those of a low vitality and excessive alkaline saliva have tartar formed on their teeth, and what an uncleanly and unhealthy condition soon exists. The impossibility of the children ever wearing artificial dentures also makes it important to take every precaution to keep the natural teeth in the best condition possible.

A CLASS IN ADVANCED KINDERGARTEN.

CORNELIA E. DEUEL, Syracuse, N. Y.

From the simple form and color-work is developed a class in weaving and card embroidery. The children are girls from eight years to thirteen years old and nearly all of them greatly interested in these first steps. This work is entirely individual in character. The regular dictation kindergarten lessons have been found impracticable, as one child understands so much more readily than another one of the same age, and so advances more rapidly.

The simple designs in card embroidery are easier than the "over and under" of the first mat-weaving; so the first straight lines and crosses are worked all in one color with perseverance and an enthusiastic interest. After a week's time two colors are used and the children quickly see that it makes almost a pattern. Then ideas of alternating lines and crosses, by the use of three colors, come to many of them naturally, and some of the designs made are really pretty. Of course many of the children do not originate anything, but are content to copy what others do or to wait for the teacher's pattern and instruction. After these plain stitches come the cards with animals, groups of children, houses and flowers, in quite elaborate designs and in a variety of colors, each one requiring some little ingenuity to make it appear real, the object for which they all strive. These designs are to be pricked out. Their hands in sewing the cards already pricked have gained a firmness and accuracy of direction that makes "pricking" a second step. Then, too, it is more interesting for the children and they ruin fewer cards. The color, shade and combinations of color show the

different degrees of development in no slight measure. Every child will choose the green for grass and trees, brown for animals and usually for birds, as their ideas are of course gained from observation of natural objects. After this the placing of colors which combine well is as good a classifier of the nature of the child as any test that one can invent. One pupil, a sensitive, well-bred child, in working the design of a girl with an elaborate dress, bonnet and sash, showed a delicate sense of color and shade that was surprising. Another betrayed her nature by a combination of two conspicuous colors without harmony or beauty. Whether she can be taught gentleness to any extent, by teaching her what colors blend, is extremely doubtful, but in the six months she has been in the class it seems as though she had gained a little. This is as far as any of the children have developed; but others take up mat weaving and with the designs in front of them work accurately. Of six who were working at weaving, two made designs of their own, using three colors, and their combinations were well arranged. With the weaving come the basket making, and also the little fancy chairs, tables and cradles, which the "occupations" contain. These are of stamped paste-board and smooth sticks. After they are shaped, narrow bright paper ribbon is run in and out, and this is another opportunity for original work, interesting in class development. The idea of soft blues and pink for a cradle, because they are used for a dainty little baby, is quickly understood, and so with the stronger colors and objects. Children who began at the beginning and have worked up to the basket making are much quicker and neater than those who, because they seemed able, were allowed to take up such work when they entered the class, that it at once proves the advantages of the first steps.

After these come the Kensington Embroidery. At this several in the class do very pretty work, and without assistance except in selecting colors suitable for the design. In a class of twenty-five there are all kinds of work—from the first crosses to linen embroidery. The variety keeps them all interested, as each girl has a pride in her own special piece, which imparts more of stimulus than if all were working at the same kind of pattern.

It is an interesting and enjoyable class, and though considered

somewhat in the light of a recreation, tends to make the children more like those who are better endowed than would other more useful occupations.

“Who does best the task appointed
Her the master most approves.”

A STUDY IN WOOD WORK.

THYRZA C. WILLIAMS, Haddonfield, N. J.

Three years ago we adopted the Russian system of wood work in the Haddonfield School. The results have been marvelous. One boy, who three years ago, could not saw a straight line, can now make and carve a box, entirely alone, a thing that any bright boy might be proud of. He can take a bit of clay and model with true artistic touch any fruit or vegetable that one places before him. In February he commenced to paint with water colors. What were once clumsy fingers can now paint with delicacy and ease. My advanced class in wood work and carving can now do nine exercises and apply them to useful things. A wood box, a clock, some nail boxes, frames, stools, etc., are the results of a year's work. The second class, made up of pupils who began eighteen months ago, can now saw, plane, drive nails and insert screws. They carve straight lines and form geometrical designs with straight lines. The results for this class are calendars, thermometers, blotters and stools. The kindergarten class is very proficient in the use of saw and screws. Just here I should say that I have carried out my own ideas in this instead of keeping the pupils working on the set exercises. In the Russian method, usually taught, the whole course of exercises should be completed before applying them to practical work. To all children, especially older pupils, this is discouraging; we like to see results, to make what is useful and beautiful. If this is true for bright minds, how much more true is it for feeble minds. As soon as the child can use the tool for carving steadily enough to make a straight line, I form a design of diamond shaped figures for the back of a blotter, or whatever he has learned to saw and plane. He sees his piece of wood work beautified and his ambition increases to accomplish more. The freedom of choice given by the Russian method is greater than that given by Sloyd, it also gives a wider range of subjects and objects; therefore, it is more desirable for practical purposes.

SELECTED.

CONTRIBUTION TO THE PSYCHOLOGY AND PEDAGOGY OF FEEBLE-MINDED CHILDREN.

BY G. E. JOHNSON.

Fellow in Pedagogy, Clark University.

I.

(Continued from September number.)

MEMORY-SPAN OF FEEBLE-MINDED CHILDREN.

With idiots we find the weakness of memory we should expect from their lack of desire and inability to attend. That this weakness of memory is due in any large degree to lack of physiological retentiveness, is by no means certain. It is well known that examples of extraordinary memory, in certain lines, among idiots, is not uncommon. Scurture's study of arithmetical prodigies shows that these men possessed wonderfully retentive and quick memory for numbers, but the general intelligence of some of them was of very low order.¹ In speaking of *idiots savants*, Dr. Down tells of one boy who could recite all the answers in Magnall's Questions without error. There are other cases where there has been a remarkable memory for names, addresses, dates, etc. One boy could hum every tune correctly that he had just heard at an opera.² Ireland quotes from Dr. Forbes Winslow the case of a man who could remember "the day when every person had been buried in the parish for thirty-five years, and could repeat, with unvarying accuracy, the name and age of the deceased and the mourners at the funeral. But he was a complete fool. Out of the line of burials he had not one idea, could not give an intelligible reply to a single question, nor be trusted even to feed himself."

By memory-span is meant the limit of the power of the memory to reproduce from a single hearing or seeing, immediately and without error, a succession of figures, nonsense, syllables, or letters, etc.

¹ *Am. Jour. Psych.*, Vol. IV. No. 1.

² "On Idiocy and Imbecility," p. 286.

Immediate memory is a designation sometimes employed. It has been thought by some that the memory-span is an index of mental power.

Galton¹ tested the memory-span of idiots at the Earlswood Asylum. He selected nine of the best girls from the class-room. They could read and write a little, but could not add 3+5, etc. The results of these tests are shown in the following table, A. Six other girls were tested, with results as shown in the table, B.

No. of Cases.	Greatest Number of Figures that could be Recollected.		No. of Figures at which the Memory First wholly Broke Down.
	Perfectly.	Imperfectly.	
A	I	2	3
	I	3	4
	I	4	5
	2	4	6
	4	5	6
B	I	2	3
	2	3	4
	I	4	5
	I	5	6
	I	6	7

With the inmates at Dartford were obtained the following results. The lower figures indicate the number of children who succeeded in repeating the series denoted by the figures above. A figure placed between columns indicates a doubt as to which of the two columns it belongs.

Class 1. The four sharpest children, ages 9, 12, 13, 15. The quickest of these, who repeated nine figures, was only "morally imbecile."

2	3	4	5	6	7	8	9	10
			1		2		1	

Class 2. Ages 9-16.

2	3	4	5	6	7	8	9	10
1	1	1	1	2	1	1	1	

Class 3. Three of those whose span was only 2 had been remov-

¹ *Mind*, 1887, p. 79.

ed from school for nearly twelve months. Their ages were 18, 18 and 19. The others range from 11 to 15.

2	3	4	5	6	7	8	9	10
4	2	5	2					

Class 4. Ages 11-15.

2	3	4	5	6	7	8	9	10
	2	1						

Careful and extended observations upon the memory-span of school children have been made by Jacobs,¹ Bolton² and Bourdon.³ Galton's observations of idiots were supplementary to Jacobs' work. The writer has undertaken to compare results obtained from feeble-minded children with those obtained by the above-mentioned gentlemen from normal children. The children observed were inmates of the Massachusetts School for the Feeble-Minded, at Waltham. They were, with a few exceptions, the so-called "school-cases."

The tests were made as follows: Each child was taken apart from the rest, and after a few preliminary tests, to insure the clear understanding by the subject of what was to be done, a series of digits was read off, which were immediately repeated orally by the subject, the result being entered in a note-book. The first series given consisted of three figures, *e. g.*, 7, 4, 9. Six series constituted a test. Series of four figures were used in the second test, five in the third, and so on. The usual conditions as to monotonous and measured utterance were observed, about three-fifths of a second being the time allowed for the speaking of each word.

Below is given one of Jacobs' tables, showing the results obtained from the pupils of the North London Collegiate School. The answers were not given orally, but were written. The averages are made from the highest number of digits correctly reproduced by the several pupils:

Age,	8	9	10	11	12	13	14	15	16	17	18	19
No. of Subjects,	8	13	19	36	41	42	42	72	66	50	30	14
Average of Numerals,	6.6	6.7	6.8	7.2	7.4	7.3	7.3	7.7	8	8	8.6	8.6

Of seventy-two feeble-minded children who were tested by the writer, throwing out two who could not understand the test, the aver-

¹ *Mind*, 1887.

² *Am. Jour. Psych.*, Vol. IV. p. 362.

³ *Revue Philosophique*, Aug. 1894.

age limit or span, according to Mr. Jacobs' method of computing, was 5.3. This is less than the average found for normal children of eight years of age by 1.3.

Of 72 children, 70 succeeded in repeating 3 digits correctly.

66	"	"	"	4	"	"
51	"	"	"	5	"	"
27	"	"	"	6	"	"
14	"	"	"	7	"	"
4	"	"	"	8	"	"

Thus 27, or 36 per ct., were .6 below normal children of 8 years; 14, or 19 per ct., were .2 below the average for children of 11 years; while 4, or 5 per ct., surpassed the average for children of 15 years.

From the above it will also be seen that 4, or 5 per ct., reached their limit at 8 numerals; 10, or 14 per ct. at 7; 13, or 18 per ct., at 6; 24, or 33 per ct., at 5; 15, or 20 per ct., at 4; 4 or 5 per ct., at 3.

Mr. Bolton found the per ct. of correct answers for 4, 5, 6, 7 and 8 place numbers. The following shows his results for the pupils of the Freeland street school, Worcester, Mass., at the first test.

No. of Digits.	Per Cent.	No. of Digits.	Per Cent.
4	.92	7	.379
5	.79	8	.256
6	.601		

For feeble-minded children the results obtained by the same method of computation give the following table:

NUMBER OF CHILDREN.		PER CENT. OF CORRECT ANSWERS.				
Group of	Average Age.	Number of Digits.				
		3	4	5	6	7
72	13.4	93	83	47	25	
63	12.7	100	91	53	29	
37	14.4		100	86	50	
13	13.9			100	93	50
8	15.5				100	62
2	14.2					100

Here it will be seen that the averages for all the feeble-minded children fall far below those of the normal children. But 63 of the 72 children almost reach the average of the normal children for 4

place numbers; 37, or 51 per ct., surpass the average of the normal children for 5 place numbers, and 13 per ct. surpass for 5, 6 and 7 place numbers.

Bourdon tested boys singly and orally. He gives the following table :

		PER CENT. OF CORRECT ANSWERS.		
Age.	No. of Cases.	Number of Digits.		
		6	7	8
8	6	22		
9	13	59	13	
10	12	56	28	
11	6	61	5	
12	9	74	37	19
13	7	43	33	19
14	7	90	43	33
15	5	47	40	20
16	7	62	33	14
17	9	70	26	15
18	8	58	46	25
19	7	83	28	6
20	8	75	46	29

Feeble-Minded Children.

		PER CENT. OF CORRECT ANSWERS				
Age.	No. Cases	Number of Digits.				
		3	4	5	6	7
8	2	100	75	41		
9	6	100	80	58	30	8
10	5	56	50	20	6	
11	6	90	80	38	16	
12	7	92	80	52	6	
13	10	100	75	41	33	16
14	9	96	74	46	24	
15	5	100	90	43	20	13
16	3	100	100	88	72	
17	4	79	79	37	20	
18	3	100	88	33	33	27
19	4	100	100	79	50	8
20-21	2	100	100	83	91	8

Although we cannot class feeble-minded children by age and have the classifications speak with any special significance, it is nevertheless interesting to compare the above table with Bourdon's. Here, again, the difference between normal and feeble-minded children is marked, but there are striking exceptions. The group of 6, 9 years old feeble-minded children surpass the group of 8 years old normal children for 6 place numbers. The group of 16 years old feeble-minded children surpass Bourdon's children of the same age for 6 place numbers. Also the two of 20 and 21 years surpass Bourdon's average for boys of 20. These tests were made under conditions rather unfavorable for obtaining the highest results from the children tested. The entire number of series was given to each pupil at one sitting. If a child passed successively from the six series of 3 place numbers through the series of 7 place numbers, there were thirty repetitions to be made, each requiring perfect attention. This is a great tax upon a feeble-minded child. The tests were made under conditions, also, many times when there was much to distract the attention of the subject through noise or passing of children. There is no doubt that the results obtained are not above, but rather below what might be expected under other conditions. As to the character of the errors, they were similar to those observed by Mr. Bolton with normal children. Transposition was by far the most common error; the first and last figures were best remembered. One noticeable error was the transposition of a figure two places from its original position. There was one case of tendency to duplicate, as was noticed by Galton, where the subject inserted an extra figure, repeating one of the original figures twice, as 3, 2, 3, 4 for 3, 2, 4. Much interest was generally manifested by the children in these experiments. They were anxious to do well, and often asked: "Did I do all right?" They were usually susceptible to emulation. It was striking how their flagging attention and almost collapsing memory could be stayed for further trial by praise and encouragement, or by incitement to surpass another. The results of the memory tests show that the feeble-minded fall considerably below normal children in memory-span. But the memory-span is so good in some cases, and the average for the majority is so high, that we are led to conclude that the degree in which the memory-span of feeble-minded children falls below that of normal children is not commensurate with the degree in which the feeble-minded fall below normal children in general intelligence. Moreover,

it is evident that the deficiency in attention and will power, so proverbial in the feeble-minded child, would tend to cause the memory-span to be lower than that which a normal child of equal physiological retentiveness of memory would have. Hence we may conclude that weakness of memory, physiologically speaking, is not a specially prominent factor in feeble-mindedness. As to the relation of the memory-span to intelligence in these children, there was generally an increase of memory with intelligence, but there were notable exceptions. It was impossible to arrange the children tested all in one class in the order of their intelligence. However, some of them were thus arranged in different classes, and below will be found tables indicating the relation of memory-span to intelligence.

CLASS I.

Place in Class.	Memory-Span.	Place in Class.	Memory-Span.
1	8	11	4
2	8	12	5
3	8	13	6
4	7	14	4
5	7	15	5
6	5	16	4
7	4	17	7
8	5	18	4
9	6	19	4
10	5		

CLASS II.

Place in Class.	Memory-Span.	Place in Class.	Memory-Span.
1	8	5	3
2	5	6	6
3	7	7	7
4	7		

CLASS III.

Place in Class.	Memory-Span.	Place in Class.	Memory-Span.
1	6	6	5
2	5	7	5
3	6	8	5
4	6	9	4
5	4		

CLASS IV.

Place in Class.	Memory-Span.	Place in Class.	Memory-Span.
1	5	5	3
2	5	6	4
3	7	7	3
4	4		

V.

Place in Class.	Memory-Span.	Place in Class.	Memory-Span.
1	4	5	3
2	5	6	4
3	7	7	6
4	2		

THE MOTOR ABILITY OF THE FEEBLE-MINDED.

No one who has ever seen a company of low grade feeble-minded persons will ever forget the strange anomalies in their movements. The rolling head, the convulsive shiver, the contorted features, the strange postures of hands and body, the puzzling gesticulations, the rocking gait, leave an indelible impression even among all the other curious and at first deeply repulsive features presented by this unfortunate class. I believe no special study has ever been made of the motor ability of idiots. Many writers have spoken of the curious motor abnormalities seen among them, but no one has made an attempt to study at length their spontaneous movements, or to compare the willed movements to those of normal children and adults.

Every living idiot has some motor power. Indeed, in some of the lowest cases there is found the most incessant motion. Many of these movements involve only the fundamental muscles of the trunk. M. W., a girl, sits upon a settee and rocks constantly back and forth. Many cases of this kind are noticed among the girls. Often the rocking is accompanied by the humming of a measure or two of some real or fancied tune. One woman rocks herself constantly when in a rocking chair, but generally sits still when on a settee. A different movement, and doubtless made for a different purpose, although involving the trunk muscles, is that of F. C., a boy of nine. This boy sits upon the floor or settee with legs crossed Turkish fashion under him; his arms are crossed and placed in front of the knees. The body is then raised, while the arms remain upon the floor, and the

head is brought down like a trip-hammer upon the wrists. The beating is rapid, and if the boy is undisturbed will continue incessantly for hours. Upon the forehead and arms where the blows have fallen, the skin has greatly thickened. E. C., a girl ten years old, rocks in a still different manner. She never sits down in a chair in the ordinary way, and if forced to do so will immediately return to her favorite position. She crosses her legs under her, half sitting, half kneeling, facing the back of the chair, with arms folded upon it, and rocks back and forth. Sometimes this is changed to a jouncing motion, with the hands rubbed up and down the lap, while at the same time a loud, harsh, wheezing noise is made, corresponding somewhat to the "huh" of a chopper. It is curious to note the persistency of some of these attitudes. This girl, when given a piece of candy, inserted it in her mouth only after she had replaced her arms in their peculiar position, reaching her mouth in a very roundabout way. H. G., a girl, age seven, is another head beater. She sucks her thumb, then her fingers, changes fingers, runs her tongue out and strikes it with forefinger or thumb, rocks backward and forward, swings head forward, backward, sidewise, alternating these movements often. She keeps her knees crossed. When she beats her head upon her arms, the blows fall sometimes upon the chin instead of the forehead. A moaning accompanies the beating as though she were in pain. If checked in the head beatings, she will often strike herself a stinging blow upon the mouth with her fist. Head movements are not infrequent. C. B., a boy of nineteen, stands erect, throwing his head far back and turning it with a uniform though rather quick movement from side to side.

The jaw is sometimes represented in these movements. One of the girls bites her apron with a quick, jerking motion of the jaw, making a noise much like that of a bullfrog. Another gives a jerking motion to her jaw with nothing in the mouth. One of the school-boys "chews" even when there is nothing in his mouth.

Arm movements are largely combined with finger movements. A boy of nine flickers his fingers swiftly back and forth before his eyes, intercepting the rays of light which enter them. This movement changes to drumming his under lip, or to touching his fingers alternately to his thumb. This is often accompanied by a shrug of the body, like that of a child riding a jack-horse, and by a chuckling noise or a chirp as shrill as that of a bird. F. B., a girl, age fourteen,

wets her right hand with the drool from her mouth, rubs it on the palm of her left hand, occasionally patting the hands together. The right hand is always the active member, the left being held palm up. After patting the left hand, the right hand is often rubbed over the face as in washing. This same girl has a peculiar habit of putting her right middle finger against the left upper canine tooth, pressing it slightly. The finger is removed, looked at (about the only thing this girl ever looks at) and the process is repeated. The ritualistic exactitude and definiteness of these movements are very striking. A. L., crosses her left ring finger under the middle finger, placing her thumb against the ring finger, the forefinger dropping down over the thumb; the right thumb and forefinger touch, the little finger being crossed under the middle finger. With wrists crossed so that the fingers point towards the breast, always in exactly this position, she beats the tips together. One girl snaps the knuckle of her left middle finger with the thumb of the other hand; another places thumb and forefinger together and shakes hands in short, swift oscillations. E. B., a boy, age eighteen, rubs his hands, then shakes them, the arms being held horizontal and moved towards the centre of the body. He also pats the back of his right hand in the palm of the left. Sometimes he stands and rocks his body from side to side.

Perhaps among these spontaneous movements may be classed also those movements of the muscles of the face which are seen in the gesticulating children. A. N., a girl unable to talk, has a constant change of facial expressions. This is accompanied largely by gesticulations of the hands. In her face one may read what would ordinarily be interpreted as surprise, interrogation, assent, negation, deference, following in quick succession. The tongue protrudes and the face expresses dissatisfaction, as though there were a bad taste in the mouth. Then the eye-brows are lifted, then the eyes are squinted, a laugh follows, and then a scowl. She will point and gesture with her hands, accompanying the motion with expressions of the face as though she was an educated deaf mute, but apparently there is no idea which she desires to express. I endeavored to communicate to her, by motions, that I desired her to get my hat which lay on the piano, but, though she answered me with animation in her own language, we did not understand each other. Sometimes she will open the door for an attendant and bow her out with the greatest cere-

mony. Any gesture made to her is immediately imitated or followed by one of her own which is similar. I made a peculiar move of my head to her on one occasion. I repeated this several times at intervals and it was followed on her part as quickly and uniformly as though she were worked with a string. G. P., a boy aged nineteen, is another gesticulator. He imitated any movement of the hand or arm, but had not much change of facial expression. A higher grade of movements, which, nevertheless, in some respects seem akin to spontaneous movements, are those which are exerted upon some external object. A. R., a boy twelve years old, knows almost nothing. When pleased he rolls his head and then rubs his hands in front, bowing head and body. He follows this by putting his hand upon his head behind his ear. His delight is a piece of cardboard and a clothes-pin. He takes the clothes-pin between thumb and forefinger and twirls it upon the card. He does not grasp the pin ever, although he has some prehensile power. This boy would attend to sound and also to objects moved in front of him.

C. B., the boy who rolls his head, has a curious but very dear toy. It is simply a long strip of cotton cloth, which he rolls up with his fingers, unrolls, repeating the operation over and over. In the night he will sometimes sit up in bed rolling and unrolling his treasure for hours at a time. "It makes a nice roll," he says.

A., a boy, age eighteen, sits playing with the lapel of his coat, twirling the raveling between thumb and forefinger. This raveling he bites off. Large portions of his coat are bitten off in this way.

W. M., a boy aged eighteen, is tall, bony and very strong. He scowls, shakes his head, shrugs his shoulders, squints his eyes, and has an anxious look. He is very suspicious and restless, wants to be let alone, and is obstinate. He cannot talk. He throws his head back, then to the right side, and puts his tongue against his teeth, making a blatting noise. He performs his motions at his shadow, tears his clothes, pulls out the threads and blows them into the air. These threads he twists together, making a very long string, which he winds into a ring. This he plays with by placing it upon the back of a chair, edge of the table or his shoulder and dropping it.

The feeble-minded were remarkably free from the nervous twitchings and the bad hand postures mentioned by Dr. Warner. I found one case of convulsive hand and two of twitching fingers. In two cases the arms twitched, but not the fingers. Occasionally the thumbs drooped.

The test for bilateralism gave no striking results.

In the movements described we have an interesting though puzzling psychological problem. Do they result from some internal condition of the nerve centers which produces a tendency to discharge along certain tracts, or are they in fact purposive movements executed for the sake of the sensation produced? Seguin distinguishes four classes of anomalous movements: "Disordered, when their want of harmony prevents the accomplishment of their object; mechanical, when their recurrence, in the course of other normal movements, cannot otherwise be produced or prevented, but can hardly be postponed by a superior influence; spasmodic, when they proceed from an accessory condition of the nerves co-gener to chorea or epilepsy; automatic, when they consist in the continuity or frequent recurrence of a single unavoidable gesture without object or meaning."¹ The movements which have been described the writer understands to be what Seguin would call automatic. Movements which were manifestly spasmodic have been only incidentally mentioned. These movements were, however, more or less under the control of the will. Many could be stopped at will by those who made them, and often were stopped at the command of an attendant.

Anger was sometimes manifested at being checked in the movements, and it is natural to suppose that pleasure or relief of some kind was involved in all of them. It seems that a stimulus which would be extremely painful to a normal person may be pleasurable to an idiot, for example, the powerful stimulus of head beating. But that there should be this great difference between these head beaters and normal persons in the pleasure-pain threshold is not so surprising when we learn that B. R., a boy of nine, once remained all day with his dress actually pinned to the flesh and made no complaint. Yet some of the stimuli in these movements are very gentle. This same boy who beats his head so severely rubs the tips of his fingers over his thumb or drums them upon his lips. If you touch him gently on the cheek or neck, he will cease beating to turn his head in endeavor to be free from the touch. One girl will sometimes touch the fingers together lightly, giving a squeal of delight. Whether the latter is an expression of a native, physical well-being, or the result of the touching of the fingers, is hard to say, but they are coincident.

¹ "On Idiocy," p. 57.

In regard to the light which these movements may throw upon the psychic life of the idiot, it is of advantage to compare the idiot to the new-born infant. The psychic life of a babe just born is reflex, instinctive, emotional; its movements are reflex, instinctive or impulsive movements. It has sensations, but not yet percepts. But very quickly, in the case of the normal child, out of these first movements develop voluntary movements, out of the sensations percepts. Preyer says the infant just born is totally deaf and quite incapable of seeing. That this deafness and blindness are due to any physiological immaturity of the organs is not certain. It is possible that sound is transmitted immediately after birth, but the sensation is received by a mind perfectly empty of percepts. Why should the child turn his head toward sound? There are no associations in his mind, no ideas possible to be awakened by sound. Preyer's experiments prove that the infant's eye is sensible to light a few minutes after birth. The writer sees no reason why we should not suppose that images are found on the retina and perfectly correct impressions conveyed to the brain of a new-born infant. That there is no distinction of color, nor of boundary, nor of form, if such be true (for perhaps colors produce their characteristic sensations from the first), may be due not to any real blindness or fault of the organ, but to emptiness of the mind. In other words, the infant, if deaf and blind in any sense, is intellectually deaf and blind; or at least, and this serves as well for the illustration, there comes a time when he is only intellectually deaf and blind. The stimulus of sound or of light is *sensed*, but not *perceived*—the impression is made in the nerve centre, but not recognized. There are auditory sensations and visual sensations, but not auditory and visual percepts. These follow very quickly in the case of the normal infant; with the idiot they may come very tardily or not at all. The intellectually deaf and blind children mentioned by Seguin are in point, where perfectly formed eyes accompanied blindness and perfect ears deafness. This intellectual deafness and blindness (why should we not as readily extend it to all the senses?) may continue in regard to certain stimuli, but be overcome in others; for example, Itard's boy heard some sounds, and others equally loud he did not hear. There is not sufficient reason for thinking that the organs were incapable of receiving and transmitting the sound which was not "heard." The reason was intellectual rather than physiological. One stimulus resulted only in sensation, the other produced a sensation

that awakened an already developed percept. Cases of intellectual color-blindness are common in school children, and feeble-minded children who see perfectly well, and even uninstructed deaf-mutes of six or eight years of age, are unable to recognize pictures. Nowhere can we draw a definite line between sensation and perception. Whether we have one or the other is a matter of native intelligence or of education.

Now with idiots it would seem that the higher process, whereby the phenomena that are predominantly physiological become predominantly intellectual, is deficient or wanting. The psychic process stops very largely at sensation, the transition to percepts and to ideas cannot be made. Endowed with sensibility and considerable energy in many cases, but lacking even the instincts which direct to a purpose the movements of lower animals, their life is passed in the pursuit of sensations, and that, too, of sensations which are gross, fundamental, and farthest removed from those which usually give knowledge of the qualities of objects.

As regards the education of idiots, these spontaneous movements may have great importance, and they give valuable hints concerning the psychic life.

There is a tremendous energy manifested in a few of these movements, and where the movements are less energetic, the expenditure may be great in proportion to the amount there is to expend. All this force is needed for movements that are rational. Hence it would seem necessary in training an idiot for the best results possible, either to check his expenditure or in some way divert it into movements made for some purpose other than sensation. I do not see why, in some cases at least, these movements might not be the bases upon which could be formed useful movements. C. B. could roll surgeons' bandages into "nice rolls" with pleasure and usefulness, if there were such to be rolled. Apparatus might be devised to aid in checking some of the movements. Rubbing or patting of the hands could, perhaps, be very gradually developed into movements by which the hands might be trained to grasp, to button, to wash each other, etc. It has been demonstrated that if the right order is followed, great progress is possible. Seguin in training the "idiotic hand" of R. began with those movements which were already under some control, viz., the elevator muscles of the arm, and descending successively, gradually from the spine, he brought under intelligent control the

movements of the arm and the hand. "In the first place," he says, "the movements commanded to R. were those commencing nearer the spine; the trainer gradually extending the operations of the will (the will communicated to the pupil by imitation or command) to the groups of muscles approaching the extremities. Thus the limb, in training, not only became capable of a few willed movements of totality—later applicable to a great number of operations and convertible into smaller movements of the farther extremities—but the mind, being drilled to be carried over regions previously ruled by automatism alone, extended its dominions and circulated, as if at home, from the great centres to the most delicate groups of sensitive and contractile tissues at the periphery, and soon thence reached centripetally."¹

Here it may be said that nothing regarding the education of the feeble-minded seems more urgent to the writer than the earliest possible training. If it is important to correct automatisms, it is important that they should not be allowed to become deep rooted by years of practice. Nor should the hands be allowed to pass these earlier years utterly without intelligent movements. The earliest departure from the normal should be the signal for beginning motor and sense training. From what has already been said, it is easy to see the importance of early sense training for the idiot. The baby's hand finds knowledge in feeling, the idiot's does not. Sense impressions in the normal child are enjoyed for their mental stimulus,—he has an intellectual interest in things. Sense-impressions in the idiot are of interest for their effect in the physical organs, for pure sensation tone. Hence, an impression with a minimum of sensation, such as sight or sound, is unheeded; only bright and dazzling objects, as in the dark room, or music can attract his vacant look, or catch his ear. He must be *startled* from his automatisms, new paths of motor discharge must be opened up to oppose them, and then the process of transformation of physiological into intellectual elements must be awakened in him. This process, which begins in the normal child at once, should not be delayed in the idiot for years. That this process can be awakened has already been fully demonstrated in cases of apparently hopeless idiocy.

Voluntary Movements. Very low grade cases were tested as to

¹ "Psycho-Physiological Training of an-Idiotic hand," Archives of Medicine, Vol. II.

their ability to execute definite willed movements. It will be interesting to describe in detail some of these cases :

D. C., age fifteen, is a fat, strong, clumsy girl about five feet in height, with wide face and head, red cheeks and happy expression. She cries and laughs as easily as a baby. She is one of the rockers, and sways backward and forward with a singing noise. This she will stop at command. When happy she touches the tips of her fingers to each other, often giving a squeal of delight. Convulsive movements of the fingers are noticed during this exercise. She regards her fingers for a moment, contorts her face, then laughs gleefully. Her head sometimes drops forward, her chin resting upon her breast, while a convulsive shiver passes through the body, her arms being tightly folded. This was especially noticeable when she was made to stand.

She cannot dress nor wash herself, but is able to get out of bed alone and feeds herself at the table. She marches awkwardly with a bob and a hitch of the body, right foot forward. She can rub the floor a little. As to her intellectual life, she is said to remember her people when they visit her; knows when her hat and shawl are on, that she is to go out; remembers her place at the table. She does not talk, although she is able to say a few words. The bright moment in her intellectual life was one day when, as Superintendent Fernald was passing, she exclaimed, to the amazement of all of the attendants, "Halloa, Doctor." She is not devoid, altogether, of the power of attention, as the following tests show: She regarded a toy cat, which was handed to her, thirty seconds. She followed with her eyes twelve times a pencil moved before her face. She regarded a book for about a minute, laughing hysterically and occasionally singing. She gave attention to a small bell that was handed her, and seemed amused. She understood such commands as "rise," "sit down," "hold out hands," "put out foot." This girl could stand very still, except for the occasional shiver previously mentioned. The control of the arms was poor; she could fold them, but could extend them vertically or horizontally only very imperfectly. She could do from imitation what she apparently could not do from command, although she seemed to understand. She had little control of the fingers, and could not imitate the finger movement shown her.

A. C., girl, age sixteen, talks, but not with understanding; is large, full-fleshed and strong; did not succeed in putting hands out

in front until she took blocks in her hands and imitated gymnastic movements counting rhythmically. When asked to put out her hands, her arms became stiff while her hands were thrown back, fingers spread. It seemed easier for her to place hands over her head. She could swing her arms well, walked strongly with feet spread, could kick, skipped rhythmically as if trying to dance, and clapped her hands rhythmically. At first she had much difficulty in opening and shutting hands, but with a little practice succeeded in doing it when I counted for her.

M. W., adult female, who can talk, when told to put out her hands in front, the position being shown her for imitation, placed her left hand in front and her right behind. She had difficulty opening and closing hand in command; in her endeavors the hands were clenched tightly, the wrists being twisted down and out. She had no difficulty in clasping a stick that was given her, and later extended her right arm in front, with fingers spread.

K. A., female, age thirty-five, has a large, bony frame; can scrub and make beds. She is fond of waltzing, and waltzes alone to music in good time, and quite gracefully. When tested in arm swinging, she made seventeen revolutions in ten seconds, but succeeded in opening and closing her hand only seven times. She was unable to spread her fingers laterally.

The tests just mentioned, and also those made with higher grade cases, the description of which is to follow, are suggestive rather than conclusive in anything. The difficulty of making tests with the feeble-minded is apparent. What might be easy with normal children of six or eight years, with feeble-minded children can not be done. A test which requires any introspection on the part of the subject must be discarded, except in the most intelligent cases, where, of course, the test becomes proportionately less valuable as the subject approaches the normal. But these few tests show that experimental psychology and pedagogy have no impossible field even among idiots. With limited time and facilities, comparatively meagre results only could be obtained, and yet the writer feels justified in claiming for them much that is suggestive and useful.

Thirteen boys in the training class (which precedes school-work) being engaged in stringing beads, were timed to see how many beads they could string in two minutes. They were told to string as fast as they could, and they were eager to be quick. Most of them had

practiced this exercise for one year or more. The average number strung in two minutes was 18.9. These boys were asked in turn to drive a nail. None of them, probably, had ever tried it before. Eleven succeeded, seven doing very well indeed. One who had much difficulty in holding the string in his fingers properly and in stringing the beads, pounded away at the nail with delight and success. Nine of these boys succeeded well in throwing a ball over-hand.

Swaying tests were made on seven boys and five girls with the ataxiagraph. Nine of these children were school cases. The averages were as follows :

7 boys, average age 13 years, 6.52 cm. by 4.44 cm., eyes open.
5 girls, " " 13.4 " 5.76 cm. by 4.7 cm., " "

Hancock's tables show the following results :¹

35 boys, 5 years old, 5.8000 cm. by 5.2228 cm., eyes open.

22 girls, 5 " " 5.7773 cm. by 4.9500 cm., " "

Tests were made in order to find the ratio of the rapidity of shoulder to finger movements. The number of revolutions that the arm could make in ten seconds was recorded, and also the number of times that the hand could be opened and shut in the same number of seconds. The averages were as follows :

		Shoulder.	Finger.	Ratio.
8 feeble-minded boys, average age	13.6	21.60	17.62	100:81
8 " " girls, " "	16.1	21.25	20.25	100:93.2
13 boys, normal " "	13.6	26.85	25.15	100:93.6
12 men, " "		25.4	32.7	100:128.
5 women, " "		22.6	32.	100:141.

There was very general difficulty even among school cases in opening and shutting fingers laterally. One, a boy of eleven, could not succeed at all, one succeeded with great difficulty, one succeeded with right hand, not with left, twelve succeeded with slowness and difficulty. Some could open between the first and middle fingers, not between middle and ring fingers. Some who could open fingers laterally could not open first finger alone. Many could not open between middle and ring fingers, but could between first and middle. In attempting these movements other movements were often made, for instance, swinging of wrist, partly closing hand, or even shaking whole fore-arm.

The foregoing observations and tests are corroborative of Mr. Hancock's conclusion, that the fundamental precedes the accessory

¹Pedagogical Seminary, Vol. III, No. 1.

in the development of motor ability. It is important to note that all the spontaneous movements were fundamental. Hardly a single one of them could be considered accessory to any other movement. They were the swaying of the trunk, the movement of the jaw, the swing of the arm, the rolling of the head, or the simplest finger movements.

In the willed movements, the difference between the control of the fundamental and of the accessory muscles was much more marked in the feeble-minded than in normal children. This was the more noticeable the greater the degree of idiocy. Some who could execute gross movements with regularity and control were wholly deficient in the execution of finer movements. Even those who walked strongly were utterly devoid of the grace which results from a well developed sense of muscular co-ordination and control. Nothing is more striking than the clumsy awkwardness of idiots. Sometimes where the control of the fundamental had been nearly perfected, there seemed a positive gap, as if the accessory had not developed. As an illustration, the case of K. A., the waltzer, whose control of fingers was very deficient, is interesting.

In the higher grade cases the difference was not so marked. The arm swing and finger movement tests previously mentioned were made with those children who were nearest the normal, but here the difference is noteworthy. The ratio of arm swings to finger movements in the adult male was found to be 100:128; in the normal boy 13.6 years, 100:93.6; in the feeble-minded boy of 13.6 years, 100:81.

In general the observations fit nicely with what we should naturally expect if the idiot be in a state of arrested development. They also show the interdependence of thought and muscular control; as muscular control increased, the power of attention and the general intelligence increased.

[Continued in March number.]

“THE hand is the best servant of man; the best instrument of work; the best translator of thoughts; the most skillful hand is yet, in respect to certain realizations, as it were idiotic; our own hand shrivels before we suspect the thousand ideas which it might realize.”—*Seguin*.

The Journal of Psycho-Asthenics.

VOL. II.

DECEMBER, 1897.

NO. 2.

A quarterly journal devoted to the education and care of the Feeble-Minded, and the care and treatment of Epileptics. Published under the auspices of the Association of Officers of American Institutions for Feeble-Minded.

EDITOR-IN-CHIEF:

A. C. ROGERS, M. D., - - - Faribault, Minn.

ASSOCIATES:

W. E. FERNALD, M. D.,	-	-	-	Waverly, Mass.
A. W. WILMARTH, M. D.,	-	-	-	Chippewa Falls, Wis.
F. M. POWELL, M. D.,	-	-	-	Glenwood, Iowa.
M. W. BARR, M. D.	-	-	-	Elwyn, Pa.

Address: JOURNAL OF PSYCHO-ASTHENICS, Faribault, Minn.

(Entered at the Postoffice at Faribault, Rice Co., Minn., as second class matter.)

EDITORIAL.

IS THE CARE OF THE FEEBLE-MINDED A HOPELESS WORK?

In discussions concerning the care, training and treatment of the state's numerous wards, the statement is frequently made that the care of the feeble-minded is the most hopeless. While this is true in a comparative sense, there is another and very important sense in which it is not true, and the unqualified statement is misleading to the popular mind.

To those who have been led to believe that the feeble-minded can become normal and go out into the world as full citizens, the results of their training do not justify their expectations; but to those who appreciate the real educational possibilities and limitations, to say nothing of the sociological phase of the work for their improvement, the results are exceedingly hopeful.

The writer had occasion to refer to the educational possibilities of this class in the Biennial Report of the Minnesota School for Feeble-Minded, published in 1895, and may be pardoned for repeating that reference in this connection.

"In undertaking the education of a feeble-minded child, we must assume in general that the possibilities of development are only limited by physical incapacities of communication between the mind and the exterior world. The psychologist recognizes at once a lack of will and that spontaneity which, in the normal child, keeps up a constant nerve activity, holds the mind continually in contact with outward objects, and develops perception, conception and judgment without the teacher's assistance. For the normal child the teacher has but to direct these spontaneous activities of the mind that they may be applied to the best advantage. As judgment is the most complex of mental operations, it is the most imperfect product of the feeble mind.

"The physician recognizes (since the time of Seguin) the dependence of these deficiencies upon imperfect nerve tissues, either of cells in the brain or conducting fibers. In some cases these deficiencies seem to exist from lack of exercise, and in others disease has destroyed the tissues, and with them the possibility of restoring their functions, while in others the necessary tissues never existed.

"The successful teacher of the feeble-minded, then, must first supply the will and establish the physical activities, and gradually evolve volitional action on the part of the child. The educational process thus consists of an intimate combination of the interdependent physical and mental exercises, the physical element being predominant at the beginning, and the more distinctly intellectual element gradually evolving as the process continues.

"It should be distinctly understood, however, that a *feeble-minded child never becomes normal*. The question is not one of *curing* the person, but of developing the mental capacity in each as far as the capacity for development will permit.

"On the other hand, there are very few individuals whose mental development cannot be stimulated, if sufficient time and care can be expended upon it.

"The story of Sylvanus, and other similar ones so often told, are not fictitious (though sometimes misunderstood); but the application of public funds to the education and amelioration of this class necessarily involves an adjustment of the expense to the recognized good accomplished on some plan of strict catholicity; hence the systematic training of the school and manual rooms can be continuously applied only to those children whose improvement is unquestioned, while for those less susceptible of improvement every effort should be exerted to provide them with the comforts of a cheerful home and such instruction, entertainment and amusement as they are capable of appreciating."

Those who have the privilege of watching the continued transformation of children of low mental activities into sufficiently intelligent people to carry on efficiently the plainer duties of life, ranking very favorably in general intelligence and efficiency of service, and often excelling in industry, force of character and courteous bearing, the lower order of paid servants, can appreciate fully the purely educational possibilities of the work.

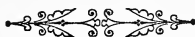
DR. J. Q. A. STEWART died at his home, Farmdale, Ky., on the afternoon of Jan. 25th, 1898. This end was not unexpected by his friends, but the announcement was none the less a shock to them. The Doctor had been a sufferer from Bright's disease for many months, and, in private correspondence, he had intimated a full appreciation of the inevitable result. In the March number *THE JOURNAL* will give a more extended notice of the life of this noble man, and in the meantime its staff can only extend its deepest sympathy to the afflicted family.

A NEW HISTORY OF THE CARE OF EPILEPTICS IN AMERICA is being prepared for early publication by Hon. Wm. P. Letchworth, of Portage, New York.

"BIBLIOGRAPHY OF EDUCATION" by Will S. Monroe, A. B., is just issued by D. Appleton & Co. for the International Education Series. Professor Monroe is an indefatigable student and teacher. He has given considerable attention to the study of defectives as well as normal children. **THE JOURNAL** congratulates him upon the publication of this admirable work. The classification and topical arrangement renders it very convenient for the reader to obtain the information desired.

THE MARYLAND TRAINING SCHOOL seems to have entered upon a new era. Dr. Frank W. Keating, the present superintendent, took charge October 1st, 1896, and a perusal of his recent report to the visitors indicates a progressive spirit and an intelligent conception of the work. **THE JOURNAL** extends a welcome to Dr. Keating and a hope that politics may hereafter bless "Rosewood" by ignoring it as a field for operations.

IOWA LEGISLATORS are considering the advisability of creating a special board to have supervision of the state institutions. Whether its duties shall be investigatory, advisory only, or executive in character is not yet determined. A committee appointed at the last session to investigate the institutions during the recess, has reported on all of them. The system of accounts at the School for Feeble-Minded at Glenwood is recommended as worthy of imitation by the other institutions.



NOTES AND ABSTRACTS.

"IMBECILITY AS AN ELEMENT IN INSANITY"

is the title of a very interesting paper by Dr. R. M. Phelps, of Rochester, Minn., (Assistant Physician to Rochester State Hospital), presented to the Minnesota State Medical Society. He says: "During the past few years I have been forcibly impressed by the large number of youthful cases admitted, these cases having usually the characteristics of feebleness of mind reaching back indefinitely toward childhood, with a history indicating a slow, progressive, degenerative change. The phrase 'high grade imbecility' seems to me after much reflection to be the best name describing these cases, even while we admit, of course, that they are rarely so named in current literature. In fact, I believe there is still a very slight recognition of the large extent to which the characteristics of imbecility invade, or interweave with, the characteristics of insanity." * * * * *

"We might name the characteristics of imbecility as follows:

- 1st. An imperfect mental development.
- 2d. An appearance or recognition in childhood or early life.
- 3d. Slowness, weakness, dullness; or irregular and unbalanced brightness of mind, with few if any delusions.
- 4th. Progressiveness either very slow or absent. (The physical stigmata are not here included, because used by us as corroborative rather than as diagnostic evidences).

In contra-distinction to the above, insanity has its characteristics:

1. Previous full mental development.
2. No appearance till about time of attack.
3. Delusions and hallucinations prominent tending toward delirium or incoherence.
4. A rapid invasion. (An acute attack or disease, as distinguished from a 'defect').

The point we wish to impress is, that the characteristics named

in the first group are found to be very prominent in admissions to our hospitals for insane. Of course but few of the cases are 'typically' imbecile, for as a general rule such ones go to the School for Imbeciles, but the modified forms of the type are many, grading down and out in a series of cases till they are lost sight of in those cases which have a large overbalancing of the group of characteristics distinguishishing insanity." * * *

Of 222 cases admitted, 7 were quite distinctly imbecile, 14 were not so distinctly so, there being definite onsets of symptoms in 5 cases, but in all, defectiveness reached back into the teens. 51 were "adolescent" or "developmental" cases.

"They have been rarely called imbecile, yet it is our contention that they are hardly more than half way along the changing grade from imbecility toward insanity. These cases in age are usually below thirty and their history shows the mental trouble to date back usually into the teens, sometimes through them. They seem to show clearly a strong defective inheritance, not sufficient to show itself at birth or in early childhood, but gradually creeping into prominence in the adolescent stage. They are apt to show approximately the mental failure of imbecility, though occasionally vacillating brightness. In the latter case 'eccentricity' 'hysterical behavior,' the words 'cracked' or 'crank' may have been applied. In a few cases they nearly deserve the name 'paranoic.'" * * *

Of the epileptics, 4 show disease dating back into the teens; of paranoids 10 show vague histories of trouble dating back to early life.

"We have thus enumerated 86 cases out of 222 consecutive admissions in which the mental trouble is a defectiveness dating back indefinitely through or into their teens, which mental trouble has no well defined beginning, but is a part or outgrowth of inherited character which even after hospital admissions has in many cases no illusions or hallucinations, but only a symmetrical weakness." * * *

The prognosis of these cases is in general very unfavorable.

"As conclusions, we might briefly state as follows:

1st. Both pure insanity and pure imbecility are for the most part existent as ideals, as types; cases grade toward one another in a sufficiently extended series and their characteristics interweave inextricably. Defectiveness will not separate itself perfectly from insanity.

2d. The proportion of the characteristics of imbecility found among the insane is much larger than is usually noted. The history accompanying rarely calls attention to it. Persistent inquiry is necessary to bring it out, for parents themselves will often deny defects most apparent to us.

3d. The analysis of one year's actual admissions to this hospital (in this state there is no selection of cases, no private asylum and no private or pay cases) fully justifies the above generalizations, and in fact is the basis of them."

"WHAT IS BEING DONE FOR THE DEVELOPMENT OF BACKWARD CHILDREN IN ITALY" is the name of an article by Paola Lombroso, published in the second number of the *Kinderfehler* for 1896. In Italy the majority of idiots and feeble-minded find shelter in the poor-houses and the insane asylums. In Aosta, where Cretins are numbered by the thousands, there is an institution for children, in connection with one for adults, which is conducted by the Sisters of Mercy, who, through their love and tact have accomplished great results. If these Cretins were left to themselves, they would neither speak, understand, nor even learn to feed themselves, but, through the efforts of the Sisters, they arrive at the point of expressing themselves verbally and do a little manual labor.

Some years ago there were founded in many of the large cities institutions for children who suffer from rickets. All the appointments are modern and they fulfill their object very well. The very poor children are accepted free; others pay a small price for board. In the first place, good nourishment is provided, then physical exercises required of them, which leave excellent results. There is a school connected with the Clinic for those who are improving and for those who are but slightly ailing, in which suit-

able gymnastics are practised. They are supplied with medicine, brought to school in a wagon and sent back again.

Colonies have also been formed for backward children, where sea-bathing and summer-outings are enjoyed. These colonies, however, are insufficient for the great number of unfortunates. Finally, there is an excellent institution for mentally backward children of people in good circumstances, at Nervi, near Genoa. It is conducted by Dr. Olivero and answers all the demands of modern requirements. It is divided into several departments. The first comprises those children whose inherited or acquired mental defects consist in this, that in development they are far behind their companions of the same age. To the second belong those who have partly or wholly lost the power of speech, but still possess the ability to hear. The stutterers form the third class, that is to say, the children who suffer from a disturbance of speech. In the fourth are found the half-deaf, both those who have become so through sickness and those whose deafness is congenital. Yet real deaf-mutes are not included. The fifth department comprises the rachitical children. Upon entrance to the school the children are subjected to a close examination, both physically and mentally.

It should be mentioned that there is also another institution at Vercurago, in the province of Bergamo, under Professor Cioni.

A CONFERENCE OF TEACHERS OF AUXILIARY SCHOOLS FOR BACKWARD CHILDREN has been recently held in Germany, as we learn from the *Kinderfehler*. It met at Hanover, Nov. 4th, 1897, and several of the schools, principally those of Hanover, Braunschweig, and Bremen, were represented by teachers and directors. Matters of interest to the schools were discussed and the formation of an association of German auxiliary schools brought up for consideration. The general aims of the association are:

1. The extension of auxiliary schools.
2. The study of the causes of mental weakness in children for the purpose of discovering obviating methods.
3. Statistical admissions.

4. The determination of methods of education in the auxiliary schools.

5. The spread of educational science in general, especially of psychology.

6. The presentation of material for the medical science of psychiatry and the study of its results.

7. Care that the mentally weak have a proper regard for the law.

8. The causing of right relations of the weak-minded to military, state, social, and domestic life.

Resolutions were then adopted for forming such an association, with the next meeting to be held the following year at Braunschweig.

AT THE ILLINOIS STATE CONFERENCE OF CHARITIES AND CORRECTION held at Jacksonville, November 17-19, the following resolutions relating to the care of the feeble-minded were unanimously adopted :

In view of the fact that there are now on file in the office of the superintendent of the Illinois Asylum for Feeble-Minded Children more than 1,200 applications for admission that they have been unable to receive.

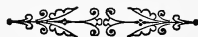
Be it resolved, That we urge upon the legislature of this state that immediate steps be taken for the extension of this institution so as to accommodate these applicants.

A teacher was admonishing her class to repeat the Lord's Prayer more softly, when the following dialogue ensued :

"Why, teacher, it says we must say it loud."

"What do you mean, Walter?"

"Why, it says our Father who art in Heaven, *hollered* be thy name, and don't that mean to say it loud?"



Journal of Psycho-Asthenics.

Devoted to the

CARE, TRAINING AND TREATMENT OF THE FEEBLE-MINDED
AND OF THE EPILEPTIC.

Vol. II.

MARCH, 1898.

No. 3.

Published Quarterly at Faribault, Minnesota.

SUBSCRIPTION, \$1.00 PER ANNUM.

SINGLE COPIES, 30 CTS.

Entered at the Post-office at Faribault, Rice Co., Minn.,
as second class matter.

THE JOURNAL OF PSYCHO-ASTHENICS.

The only periodical in the English language of general circulation devoted exclusively to the interests of the FEEBLE-MINDED and of EPILEPTICS. Published under the auspices of the Association of American Institutions for Feeble-Minded. OFFICERS: Geo. Brown, M. D., Prest., Barre, Mass.; Mary Dunlap, M. D. Vice Prest., Vineland, N. J.; A. C. Rogers, M. D., Secy. and Treas., Faribault, Minn.; Mrs. Isabel Barrows, Boston, Mass., Official Stenographer.

Subscription \$1.00 per annum; single copies 30c. *Special rates for re-prints and quantities of any one issue for distribution.* Address communications to The JOURNAL OF PSYCHO-ASTHENICS, or to Dr. A. C. Rogers, Faribault, Minn.

CONTENTS FOR MARCH, 1898.

ORIGINAL ARTICLES:—

Dr. John Q. A. Stewart.....	91
What we Do and How we Do It—Edward R. Johnston---	98
Articulation—Mary M. Raine.....	106

SELECTED:—

Contribution to the Psychology and Pedagogy of Feeble-Minded Children—G. E. Johnson	108
---	-----

EDITORIAL:—

Sensational Literature	121
Future of the Imbecile.....	122

NOTES AND ABSTRACTS:

The Will of Dr. E. C. Seguin.—The Danger of Experimental Psychology.—A National Association for the Study of Epilepsy and Care of Epileptics.—An Epileptic Colony.....	125-126
--	---------



John P. Stewart,

Journal of Psycho-Asthenics.

VOL. II.

MARCH, 1898.

NO. 3.

DR. JOHN Q. A. STEWART.

On June 1st, 1894, at a session of the Association at Ft. Wayne, the presiding officer said: "we have missed the presence of one of our most active members here. This meeting has been exceedingly instructive and pleasant but for the loss of one who gave this association its life in many directions. I think it will be suitable that the closing hour be devoted to the remembrance of that grand man who will never be with us again."

Only three years later, at Orillia, Ont., the speaker was himself "missed." This absence, because of its rarity, occasioned comment that developed the information received through private correspondence that an incurable disease was gradually sapping his life away and that in all probability, he, too, would "never be with us again." As his friends realized the situation a profound feeling of sadness took possession of the members who knew and loved so well their absent associate. A telegram regretting absence and expressing good wishes was eagerly signed by all his friends present and forwarded to him. The pathetic reply is referred to elsewhere.

Dr. Stewart died at his home at Farmdale, Ky., on January 25th, 1898, of Bright's disease, from which he had suffered for more than a year. The following history of his life and tribute to his character and worth was written by a close friend, and though it has been printed before, it seems fitting that it should be reproduced here:

John Q. A. Stewart was born February 13th, 1829, near Louisville, Ky., to which place his parents moved in his early childhood, so as to give their children the advantages offered by a life in the city.

At the age of twenty he had secured a good common school education, and had, moreover, graduated in law. Judge Drane, of Frankfort, but recently deceased, was a classmate. During the year of his graduation, and before he had begun the practice of his profession, the "gold fever" had broken out in California, and he at once decided to join his elder brother Ben and others, who had organized a company to cross the plains. The late Robert Sherley and others, of Louisville, were in the party.

The strong, forceful nature of Benjamin Stewart made his comrades select him as their leader and captain. Between him and his brother John, who was ten years his junior, the strongest fraternal feelings always existed, the younger looking up to the elder brother as the embodiment of all that was brave and manly, and he in return shielding his younger and then delicate brother from much of the exposure and rudeness of their seven years of western life.

The legal knowledge of John made him valuable to his party, and, as soon as they reached California and had built up a small town, or mining camp, he was chosen Magistrate.

Many interesting stories has he been able to tell his friends, children and grandchildren of his career as a "Judge," as the rude mining folk would call him, when he had scarcely attained his majority.

After some years of California life he returned to Kentucky, much bettered in health, if not in fortune. His experience in the west had been most valuable to him in many ways, and his quick mind and retentive memory enabled him to make the most of it.

The writer has often wondered at the minuteness and accuracy of observation evidenced by his interesting stories of his own experience and that of other "Forty-niners."

He had the keen eye of a woman, and nothing in his travels escaped him. This made him a charming companion, for he had been everywhere and loved to talk of his various trips. As a conversationalist and raconteur he was one of the best, and this power, added to his bright and sunshiny nature, always caused him to be the prime favorite of any company.

In 1858 he married Mary J. Hall, a daughter of one of Shelby

county's wealthiest planters and slave owners in ante-bellum days.

In 1859 he was graduated from the Kentucky School of Medicine, and at once went to Daviess county, Ky., to begin the practice of medicine. This he always regarded as the one mistake of his life, and such it was, looked at from the standpoint of his own and family's good, as he had a flattering offer to begin practice in the metropolis of his State. During his pupilage he had attracted the attention of one of his teachers, and so much interested did he become in the young physician that upon his graduation a place was tendered him in the professor's office. This gentleman afterwards became the leading practitioner of Louisville, with a clientele making demands upon him that he could not meet and obliging him to summon assistance. Those who knew Dr. Stewart will not question that his address, intellect and professional equipment fitted him to shine as the leading practitioner of a great city, and that he would have improved opportunities certain to have come to him had he remained in Louisville. In manners he was most engaging; his habits were always perfect, and he was the ideal "family doctor." His influence over children was simply marvelous, and he never crossed a threshold in sickness that he did not firmly intrench himself in the affection and esteem of every member of the family.

As a practitioner he was successful from the start, and after a few years' practice in the country he removed to Owensboro, that a larger field might be opened up to him. Here he lived, meeting with all the recognition, social and professional, offered by Owensboro until his removal to Frankfort in March, 1878, to accept the position of Medical Superintendent of the Kentucky Institution for the training of Feeble-minded Children, tendered him by Gov. John B. McCreary.

It is rare in this day of practical politics that a Governor in rewarding party friends makes so fortunate a selection as was made in this instance by Gov. McCreary. That his appointee measured up to the place in every way is evidenced by the prompt re-appointment by Govs. Blackburn, Knott and Buckner. He honored the position, and the sixteen years he passed in this institution were marked by a fidelity to duty, interest in his work

and an ability to carry it on never excelled in the history of our eleemosynary institutions.

It is well known that one of the above named Governors—the big-hearted Blackburn—had promised Dr. Stewart's place (before he became familiar with his work) to a warm friend and kinsman. Seeing the ability and gentleness with which Dr. Stewart managed his institution, the great humanitarian saw what a mistake he would make in depriving the State and its afflicted of the services of one whom it seemed God had appointed to a work which few like and fewer still succeed in. The would-be successor of Dr. Stewart was in Frankfort to take charge, when he was told by the Governor that he would provide for him, but that he must select one of the insane asylums in lieu of the Feeble-minded Institute, and to one of them he went commissioned as Medical Superintendent.

The Governor afterward referred to this circumstance, and it seemed to do his big heart good to feel that he had averted, though narrowly, a serious blunder.

His appointment as medical officer of the above-mentioned institution was the greatest of blessings to the unfortunates sent there, and no parent bringing a new patient, or visiting one already there, ever left but with a heart less heavy and a burden more easily borne.

A look into Dr. Stewart's face, which was an index to his kindly nature, at once invited confidence and gave assurance that in him tenderness and gentleness forever reigned supreme.

To show the esteem in which he was held by the parents of children intrusted to his care, every one who could afford it removed their dear ones to Dr. Stewart's private infirmary when his term as Superintendent of the State Institution ended; others not able to pay or have their way paid have been kept for years at expense to the doctor, simply because they asked to be taken with him and his heart was too big to deny their request.

He exalted his work as few men have ever done, and knowing this so well after an intimate acquaintance with him for a score of years, the writer does not think that he made a mistake in taking it up. Hon. Grant Greene, who was President of the Board of

Commissioners during all of Dr. Stewart's term, and the terms of several other Superintendents—and therefore competent to judge—has often said that he did not believe “as good a man, physician and superintendent were ever combined in one nature.” This has been the verdict of his Board of Visitors and Governors under whom he served, as well as of others understanding the affairs over which he presided.

Therefore it would seem that Dr. Stewart's life was a verification of the poet's words: “There's a divinity that shapes our ends, rough-hew them how we will.”

Whilst he would have met with a large measure of success in private practice, undoubtedly, it is questionable if he could ever in a large city have done the same amount of good that he now has to his account.

In the spring of 1893 his only son, John, having graduated in medicine, and being anxious to follow his father's noble work, Dr. Stewart bought the old Kentucky Military Institute, six miles from Frankfort, and established him in business as manager of the “Stewart Home.” The success of the venture was greater than expected (it being the only such institution south of the Ohio) and in the following year—upon the expiration of his term at the State Institution—Dr. Stewart resigned to be associated with his son in the management of their private infirmary. There he lived, thoroughly happy and contented with his work and beautiful environments until “God's finger touched him, and he slept.”

As an alienist, Dr. Stewart is well known all over the continent and Europe. He has visited every public and private institution in this country, and did not, for many years, miss a single meeting of the superintendents. He was an ex-President of their association and contributed many valuable papers at their different annual meetings.

In the industrial movement for Institutions for Feeble-Minded he was the pioneer—his being the first where useful trades were taught the brighter patients, to prepare them in a measure for the battle of life, when by law they were compelled to leave the State institution—gardening, carpentering, shoemaking, broom and mattress

making were taught the boys; while the girls were drilled in sewing, washing, cooking and housework.

This has now become a part of the work of all similar institutions in this country.

The highest honor the profession of a State can show a fellow is an election to the presidency of the State society. This was generously accorded Dr. Stewart at the Frankfort meeting in 1893, after the society had visited his institution and witnessed the fruits of his work. It was a revelation to nearly all of the members, and he and his work were unanimously indorsed by the society in session.

At the Shelbyville meeting in 1894 he presided with dignity and ability, and his presidential address upon the training and care of idiots and feeble-minded children was one of the ablest ever delivered and a paper of great scientific merit. It was extensively copied in the lay and medical press, dealing as it did with a subject of such vast importance to the State and humanity.

He held the present idiot law of this State up to scorn, and showed clearly how a law ostensibly passed for the betterment of mental defectives was being operated at great and unreasonable expense to their detriment.

He said that his very nature revolted at the idea of farming out these helpless creatures to unkind and mercenary guardians as was now being done.

Little wonder he wrote it—less that he felt it, for his experience had been great, and his noble and sympathetic nature too often rudely shocked by the enforcement of this iniquitous—nay, more, barbarous—law.

In politics Dr. Stewart was always a Democrat.

In religion he was for forty years a consistent member, and nearly all of this time an officer, in the Presbyterian church.

As a man, he was as guileless as a child, gentle and chaste as a woman, brave as a lion. Malice was unknown and impossible to him. He never flinched under fire, nor was led a hair's breadth from duty's path. He was firm in his convictions, tenacious of purpose and ready to stand by his principles, though it lead him to the stake.

Of personal quarrels he had none; differences he had, of

course, but when a matter was settled satisfactorily to him it was forgotten.

As a friend he was considerate, generous and loyal, and his unusually magnetic and kindly nature inspired the warmest of friendships. There have been few men in the history of Frankfort and the State as popular—none more so. He thought the world better, brighter and sweeter than most people do, and in return he gave to it more than his share in the way of sunshine, charity and self-sacrifice, and unremitting labor for the welfare of the afflicted and helpless. This is all any of us can wish to have said of us when called upon to join the silent majority.

The world is better for his living, and his days, nearing as they did the limit of the psalmist, full as they were of noble deeds and tender memories, have now been crowned by the milk-white flower of a stainless life.

"To enforce, exact, promote, induce, encourage, lead, sustain obedience in idiots, severity would be cruelty. Physical correction is useless, unless blended with the eradication of the wrong. Punishment is to be avoided till it be certain that the understanding of the wrong preceded its commission. Repression cannot be avoided; let it be employed in its mildest forms. A child could not be forced to stand motionless, even were his legs bound, who remains perfectly still in a circle traced with chalk around his feet. The anger of another changes into repentance at the sight of his name written on that part of the black-board reserved for bad records. Indeed, the means of repression are what the intelligence and feelings of the teacher make them."—*Seguin*.

ORIGINAL ARTICLES.

WHAT WE DO, AND HOW WE DO IT.

EDWARD R. JOHNSTON, Ft. Wayne, Ind.

The aim of education is to fit the child for the life he will lead. The public school, the manual training school, the high school, each aims to so teach its pupils that they may become self-supporting, self-directing citizens. In our institutions it is not so. The child is to be with us throughout his life; correct education for him must fit him for institution life. In this we have an advantage over orphans' homes, &c., where they must constantly guard against institutionizing their children, and so unfitting them for the world. We have no desire to make our child self-directing, as he must always be under the direction of the institution. What we *do* wish is, to make him as nearly self-supporting as possible in the institution.

If we teach a child to dress himself, he is contributing so much towards his own support. If he learns to polish the floor, to dress a companion, to wait on table, in short, anything which an employe would otherwise have to do, or which a brighter child would have to do, in just so much is he contributing to his own support, or to that of his fellows, for by following up the scale, we can often make our custodial children contribute much by supplanting brighter children who take the place of employes.

In writing a report for the Governor, the Legislature or the Board of Trustees, we constantly find ourselves confusing what we *do* with what we would like to do. We feel that we are like the Mikado, and if we say *do*, our command is already obeyed. However, we are now here among ourselves, and may tell what we do accomplish, and what we hope to accomplish, and keep the two distinct.

In dividing our children for the purpose of education, let us call them the high, the middle and the low grades.

HIGH GRADES.—The high grades begin in the kindergarten.

Here they spend one-half of each day, devoting about one hour daily to primary work. The kindergarten work is much the same as is done in ordinary kindergartens. Gift work receives less attention than manual, for, unless the work is intensely interesting, they are unable to do it, and follow the story at the same time. They learn to use the first, second and third gifts quite well. Of the manual work, the mat is probably oftenest used. Mat-weaving is not done by dictation as much as in ordinary kindergartens. Instead, they copy from designs. The child is thus compelled to count the strips each time, and so becomes familiar with small groups of numbers. Weaving makes excellent busy work. This class does much parquetry work from which they get instruction in color and in numbers, and the inventive faculty is exercised in making designs.

Let me speak particularly of the clay modeling and sand-table work. The former is done at the children's tables, each child being provided with a piece of oil cloth on which to work. Everything is done with the fingers. This class has not advanced sufficiently to use clay knives. Real objects are used as models when possible, otherwise pictures are used. If the class is making grapes, each child is given a real grape stem, and the clay grapes are fastened on this. When half an apple or peach is made, real seeds are placed in the center. Clay work should be done once a week. From this is learned form, size, delicacy of touch and invention. Besides teaching the above, the sand-table gives more general information, also language, number and color work. It is the basis of geography. Sand work should not be hurried, and most excellent results can be obtained. This is the one gift wherein the story and the work can go together. Each child becomes so deeply interested in what he hears and what he does that the table gets his undivided attention. The reproduction of the story by the class a few days later gives a fine language lesson.

The kindergarten games are of great value, because the voluntary attention of the child is given freely, and is easy to hold. In pleasant weather we hold our games under the trees on the playground. There are nineteen children in our upper kindergarten class. Each child has a small table, ($1\frac{1}{2}$ by 2 ft.) the top of which

is lined in inches. These tables are arranged in a semi-circle. In the center are two class tables, ($2\frac{1}{2} \times 6$ ft.) also lined in inches. Near the front of the room is the sand table, 2×12 ft. and 8 inches deep. The sand tables in most kindergartens are entirely too small. They should be large enough to permit of all of the children working on one side, so that the teacher may face her entire class. Next year we *hope* to have a sand-table about 15 ft. long set in the lawn near the school house on a level with the grass. The advantages of this are obvious.

The primary work as I said gets about one hour per day in this kindergarten class. Simple reading is taught by the word method. Articulation receives much attention. Pollard's system is used as the basis of this work, and is quite valuable to us. The vertical system of penmanship is used with good results. To avoid the cramped writing of some years ago, we use the blackboard constantly; this gives the necessary freedom of motion. The development of the finger muscle centers comes later. There is no question as to the value of using both hands in drawing and writing. It has been shown that the time spent with the left hand is well repaid by the increased improvement in the right. Left-handed pupils are, in most cases, more apt in the use of the left hand than right-handed pupils are with the right. In all probability this is due to the fact that left-handed children are more often induced to use their right hand, and so both hands are educated. I wonder that more work along this line is not done in our institutions. Our drawing does not receive as much attention as it should. We *hope* next year to have one of our teachers give special instruction in the different rooms.

From the kindergarten the children advance to the primary classes, and from this time on the sexes are kept separate. In these classes the primary work begun in the kindergarten is continued. In addition to the three R's, we have a little geography, language, spelling and physiology. The latter is very practical. Enough is given to have the pupils understand the necessity of sitting and standing correctly, the need of exercise, &c.

Some little time each day is devoted to nature study, and the observation of all things, the humanity and the respect for the

rights of animals and each other, well pays for the time given. Worms, insects, etc., are brought into the rooms and examined with the lens. Cocoons are kept until the butterfly emerges. Flowers are grown at the windows. Leaves and buds are searched for the stories they bear, until at last the children while taking their daily walks find plenty of which to think and talk besides themselves, and they see a new life in all surrounding them.

In one class diaries are kept each day, and after a two years' trial, we would not think of discontinuing them. The children learn to express their ideas clearly and concisely. They are often called upon to read and explain their diaries for visitors or the officers of the Institution, and so learn to understand the things of which they write, and also learn to think while on their feet. Although at first the diaries were very crude, they are now interesting and full of variety.

In another class a query box is opened once a week. In this the children drop slips of paper containing questions which are to be answered by their classmates, or by the teacher. The children are encouraged to ask sensible questions, and such as "Where do we get cotton?" "From what is Red Seal lye made?" "Of what use are flies?" are common questions which make excellent lessons. The children must find all they can from other sources before consulting the teachers, and many of the employes of the institution have been led to take a more active interest in what their children think by being asked such questions. The cyclopedia is used a great deal, and the amount of valuable knowledge obtained is surprising.

In one class nearly half an hour each day is given the children in which to tell what they have done, seen, thought, etc., in the day past. This is most instructive and interesting, but must be in the hands of a wise teacher. Hundreds of lessons in manners and morals are given at this time by pupils as well as teacher, and, as you all know, lessons of this kind which are apparently incidental, sink deeper than those deliberately given. And so, in the other classes, each has some specialty outside regular school work.

When the children leave the primary classes, they are ready for some trade which has, in most cases, been partially learned.

We make and repair all of our shoes, our boys' and girls' clothing, mattresses and pillows, and have but one employe in each department. A large number of girls are employed in the laundry department, but no child works there longer than half a day.

Our farm gives employment to many boys, not only of the upper, but also of the middle class. In the busy season of fruit and vegetable gathering, many of the school children are employed in the garden, picking and preparing for canning.

One class of bright boys gets a lesson of half an hour each morning in sewing. This is to fit them for the tailor shop. About 12 girls are learning to play the piano, and 16 boys play in the band. This is not given so much for its own value (although *that* is great) as it is meant for a reward. These children and the girls who are doing fancy needle work, are almost all employed in the shops or kitchens, and are permitted to receive this special instruction to pay them for earnest work. Two afternoons a week, a large number of the children (boys and girls) from the schools and industrial departments attend singing class. The boys and girls have separate singing classes once a week in the evening. In all of these classes we teach part singing. Although we have been doing this a short time, it has proven quite successful, and we hope next year to have more and better arranged classes. You will please note that I emphasize the word hope when I speak of what we are not *actually* doing.

On Wednesday of each week, during the cool weather, the girls dance, and on Thursday the boys. All of these children receive calisthenics, excepting the farm boys. In the school rooms, once during the afternoon and in the shops 6 times a day, the children put aside all work, and spend 5 minutes in doing 5 or 6 free arm exercises and a breathing exercise.

THE MIDDLE GRADES.—The best of these children attend kindergarten one-half of each day. This was experimental, but the children have made such advancement during the past year that we shall continue it. Most of their work is manual. They do best with sewing. At the beginning of the year they started by stringing large wooden beads. Then came the sewing board with corset laces, and by the end of this year they were able to use

coarse needles, sewing cards and canvas, and do very good work. They are unable to do much with the gifts. Sand table work is of great help.

The morning classes at school are made up almost entirely of the middle class. The time is divided into five bells of about half an hour each with a recess of 20 minutes between the second and third. During the third bell a lunch is given each child. It consists of a slice of graham bread and butter. This takes about five minutes of the bell.

During the vacations all of the children were examined, and it was found what each needed. Then they were assigned to the different classes, which were formed according to the needs of the pupils. The classes were then apportioned among the teachers. We have found, particularly with these children, that it is useless to attempt to force a subject upon them. The child's interest *must* be roused in a subject, and only methods which will do this are of any value. Many of our pet methods are unavailing, and should be unceremoniously dropped.

Objects are used a great deal with the middle class, as they need something tangible to their feeble intellects.

One teacher has three articulation and two color classes. In the former are children who cannot talk, or who speak indistinctly. Objects are much used here. When a child tries to say ball or block he is permitted to play with the object. Stories are also of much value in these classes, and in fact in all classes. The children are told of common things—their clothing, blankets, tables and chairs—and they try to retell what they hear. They attempt to tell of lawn-mowing, the care of flowers, the names of their divisions and class-mates, all common things in fact, for they must have something they understand about which to talk. They have tongue exercises, la, la, la, etc. The jaws are opened and closed, lips put in different positions, sometimes it is even necessary to use the fingers to place the lips. A tune is hummed and sung by the teacher over and over again, and after many trials the air seems to reach the child. He tries to imitate it, and at last makes some articulate sounds. Syllabic combinations, which are impossible

alone, are made easy by singing. Children who stammer and stutter while speaking, do not while singing.

In the color classes the children in many cases do not know the names of the colors. *They* are only taught incidentally. What we aim at is teaching them to combine, compare, separate, etc., so as to train the eye to distinguish. We use large and small blocks, large sheets of painted oil cloth, bright colored pictures, etc.

One of the things we *hope* and intend to do next year is, organize classes in which the senses of smell and taste will be exercised. Touch is taught to some extent in the other sense classes. Children close their eyes and feel objects or feel them behind their backs. It is also trained in the manual work classes, which are in charge of another teacher. Here various kinds of kindergarten work are done. The peg boards, weaving boards, etc., are all much larger than those of regular kindergartens.

In all of the work with these children we follow the theory that all knowledge comes through one or more of the special senses. Therefore, they must be cultivated and made as receptive as possible.

In another room the elements of reading, writing and number work are taught. Our aim here is to teach these children to read the simplest of stories for their own amusement. To recognize groups to 10 or 15, and to do a little writing to send their parents or guardians, as a source of pleasure to them. We have a word game similar to the ordinary game of authors which is very useful in teaching words. Dominoes are used for numbers. Taps with the pencil or on the bell are also used. There is much to be added to this work. Can we afford to do it? Each class gets but one half hour per day for reading, writing and arithmetic, all three.

Another teacher has classes in balancing and walking. A 2 x 4 is placed on the floor, and the children walk on the side or edge of it. They walk upon and between the rungs of a ladder, either on the floor or slightly raised. Some children who really belong to the lower class get this instruction.

In another class the pupils learn to sew on buttons, to make toy reins for driving, and to make bean-bags of canvas. Still an-

other class devotes one hour of the morning—half before and half after recess—to making stocking nets and hammocks. We *hope* next year to have our mops made by just such children.

All of this middle class of children have calisthenics and games. We don't attempt fancy drills—just exercise. Our calisthenics are carefully arranged, each class getting the exercises most needed by it. The simple kindergarten games and the ordinary games of childhood, which we so often forget that our children will never play unless they are taught by us, form part of the regular work.

THE LOWEST CLASS.—The greater part of our work with these children is with a view to giving them exercise—to rouse them out of themselves. Some come to school for an hour, or half an hour per day. They chase bright colored wooden balls across the hall floor; large balls stuffed with hair are thrown at them, and after many trials they ward them off, and finally catch them, and throw them on to the next. They take hold of hands and run or walk around the room. They walk the ladder.

Every day a report is sent to the Superintendent which gives the time spent in walking on the grounds or playing out of doors, by those who do not go to school.

TEACHERS.—Every Thursday from 4:00 until 5:30 p. m., we have a teachers' meeting. I cannot tell you how much good we all get from it. Suggestions and plans for the work are here talked over. There is very free exchange of thought. During the past year each teacher prepared work along the line of nature study, and two papers were presented and discussed at each meeting. I wish to say, in conclusion, that unless your teachers really believe they can accomplish what you set for them to do, it is time, energy and money wasted to keep them employed.



ARTICULATION.

Notes on a class at Haddonfield, N. J.

MARY M. RAINE.

This class is composed of five members, three girls and two boys. From twenty minutes to half an hour each day is given to articulation and the "Pollard Synthetic Method" is used. This method has been found most excellent in its results. With the exception of one girl, all recognize and can give most of the vowel and consonant sounds mentioned in this paper. This girl is able to make most of the sounds correctly when helped a little, but can give very few when the representative letters are placed on the board. She recognizes all the sounds by the use of the pictures. She has been a member of the class but a short time and considering this she has advanced as rapidly as the rest. The following are the vowel sounds now familiar to them:—*ä*, *a*, *ë*, *i*, *ö*, and these the consonant sounds — *b*, *c*, *d*, *f*, *g*, *h*, *j*, *k*, *l*, *m*, *n*, *p*, *q*, *r*, *s*, *š*, *t*, *v*, *w*, *x*, *z*. One boy is unable to make the sound of *š*, as in *fäns*. He knows what it should be but is unable to make it, always giving the true sound of *s* instead. However we are confident that he will be able to make it soon by listening to the bee and trying to imitate it. The sound *ch-tch* was very difficult at first and he could not give it, until the connection between this sound and that of the locomotive was made clear; then it was all right, for he can imitate the sound of the locomotive to perfection. The voice sound *th* as in *then*, is hard for him but he is sure to get it after a few visits to the mill and hearing the water wheel. The following prefixes, called in Synthetic Method "front door keys," are familiar and are given readily:—*sh*, *sk*, *sp*, *th*, *th*, *wh*, *st*, *bl*, *br*, *cl*, *cr*, *fl*, *fr*, *pl*, *pr*, *sl*, *sm*, *sn*, also the suffixes known as "back door keys"—*ck*, *nd*, *ng*, *nk*; *ch-tch*, *sh*, *ft*, *st*, *lt*, *nt*. The members of the class have marked in the Synthetic speller all the words as far as page 41. Four of the pupils mark very well, seldom making any mistakes. They are also able to distinguish names, quality and action words and in many cases to give the definitions.

NOTE.—The boy I speak of is quite deaf, and that is the reason he fails to get the sounds more quickly.

SELECTED.

CONTRIBUTION TO THE PSYCHOLOGY AND PEDAGOGY OF FEEBLE-MINDED CHILDREN.

BY G. E. JOHNSON.

Fellow in Pedagogy, Clark University.

II.

(*Continued from December number.*)

MENTAL ASSOCIATION OF THE FEEBLE-MINDED.

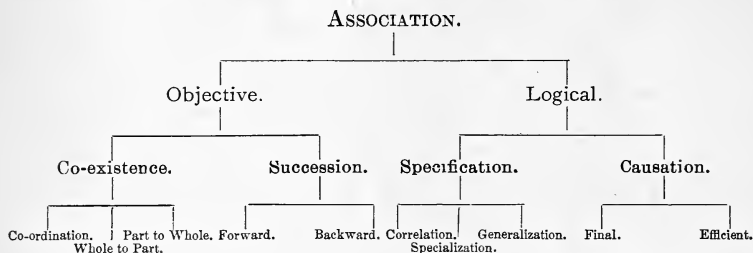
To determine the rapidity of the mental association of the feeble-minded, and, if possible, to discover something of their association habits, the following test was made: A key word was given them, and thirty seconds were allowed for writing the words which came to the mind. The number of seconds divided by the number of words written gives the average association time. The words used as starters were the concrete nouns: house, tree, chair, ship, clock, Fourth of July.

The written tests could be made only with the most intelligent children. Fifteen children, with an average age of 15.8 years, gave an average association time of 8.3 seconds. Cattell and Bryant,¹ with the same words, excepting the last, obtained from normals an average of 4.5 seconds. Thirty children, average age 13.3 years, were tested orally. Relieved of the writing, the association time was much quicker. The method employed was the same as in the first case—the key word was given, and thirty seconds were allowed for the associations, each word being written by the experimenter as soon as spoken. The average time obtained for the thirty children was 5.35. The slowest average time for any one child was 10.7, the quickest 2.7.

Ten boys, normal, were tested in a similar manner. The average time obtained was 2.61 seconds, the slowest time for any one boy being 3.47 seconds, the quickest 2.06 seconds.

¹ *Mind*, 1889, p. 235.

Cattell and Bryant, in considering the results of their experiments, made the following classification of associations :



With the word house, in 464 associations, they obtained 103 cases of co-ordination (as furniture), 22 per cent. of the whole number of associations ; 190 of whole-to-part (room), 41 per cent. ; 8 part-to-whole (street), 2 per cent. ; 25 forward (-maid), 5 per cent. ; 1 backward (glass-) ; 18 correlation (cottage), 4 per cent. ; 41 specialization (tall), 9 per cent. ; 15 generalization (buildings), 3 per cent. ; 16 end (home), 3 per cent. ; 44 means (wood), 9 per cent. ; unclassified, 3 per cent.

Put in tabular form, we have :

I. <i>Objective</i>	70 per cent. (about)	II. <i>Logical</i>	29 per cent. (about)
1. Co-existence	65 " "	1. Specification	16 " "
Coördination	22 " "	Correlation	4 " "
Whole-to-part	41 " "	Specialization	9 " "
Part-to-whole	2 " "	Generalization	3 " "
2. Succession	5 " "	2. Causation	12 " "
Forward	5 " "	End	3 " "
Backward	$\frac{1}{5}$ " "	Means	9 " "
		Unclassified	$\frac{3}{8}$ " "

With the word house, the feeble-minded gave the following percentages :

I. <i>Objective</i>	84 per cent. (about)	II. <i>Logical</i>	16 per cent. (about)
1. Co-existence	83 " "	1. Specification	13 " "
Coördination	52 " "	Correlation	12 " "
Whole-to-part	29 " "	Specialization	0 " "
Part-to-whole	1 " "	Generalization	1 " "
2. Succession	1 " "	2. Causation	4 " "
Forward	$\frac{1}{2}$ " "	End	3 " "
Backward	$\frac{1}{2}$ " "	Means	$\frac{3}{8}$ " "
		Unclassified	$1\frac{1}{2}$ " "

A comparison of the tables shows a much greater tendency upon the part of the feeble-minded to make simple objective associations. This tendency was even more striking in the case of the other words

used. (The comparatively large number of correlations with the word house is due to the peculiar environment of the children tested. For example, the word dormitory was frequently given). On the other hand, it is interesting to note that the feeble-minded range through the whole field of association. In general, we may say the characteristics of their association habit are simple objectivity and great slowness. It appears as if the children visualized the objects mentioned and named the parts. With the word tree, nearly two-thirds of the associations came under the head of whole-to-part. The following are some of the lists obtained.

House: building, table, clock, watch, lights, pictures, wall, plants, windows.

Tree: limbs, roots, branches, blossoms, apples, pears, bark.

Ship: sails, sail on water, bow, steer.

Chair: legs, back, rounds, two legs, book.

Fourth of July: ice cream, lemonade, doughnuts, dishes, tent.

The association is less apparent in some lists; for example, house: plow, horse, build, garden, school. The boy who gave this list also gave for Fourth of July, fire-crackers, torpedoes, fun, good, time; and for clock, tell time, fix it, wind.

Compared with Cattell's and Bryant's results, the number of associations which could not be classified was very large, but the degree to which many of the children held to the train of thought awakened by the key-word was a matter of surprise. Moreover it must be borne in mind that two ideas which may appear wholly unassociated to the experimenter may be closely associated in the mind of the subject.

A few trials were made in obtaining single associations. Some of these are interesting, especially so in showing the tendency to objectify abstract ideas when given. The key-word is given first, then the association made and the time.

Time, bell, 14s.; beauty, dresses, 22½s.; love, horse, 21s.; supper, milk, 3s.; congress, law, 5s.; goodness, behavior, 11s.; love, sweets, 5s.; beauty, pure, 7s.; sickness, measles, 5s.; number, one, 9½s.

The average association time of these children, as has been said, is strikingly slow, about double the time of normal children. Moreover one factor may enter here which would tend to slow the association time of normal persons, but not of the feeble-minded, *i. e.*, the factor of inhibition. A normal person in making an association

word-list can not overcome fully the tendency to pass judgment upon the relevancy of the idea before he expresses it. Many of the associations of the feeble-minded seem to show that there is little or no tendency to inhibit an idea apparently unassociated. Hence the real difference between the association times of normal and feeble-minded persons may be greater than appears from experiment. The association tracts that are traversed like a flash in the normal mind, with these children seem to be "wormed" out. Their mental association process "crawls;" it cannot leap, or if it does, it leaps in the wrong direction, and the result is incongruous. Hence the quick but silly and wholly irrelevant answers sometimes given by these children.

The teacher of the feeble-minded may be able to gather a few suggestions from what has been said that will be of service. What is the office of instruction but to present the proper stimuli and to direct the association of the mental impressions resulting from those stimuli with each other and with others previously received? More carefulness, more tact, more real teaching are needed here than with normal children, or with the deaf or the blind. The child who hears well, who sees well, who has good general sensibility and fair memory, as many of these children have, may show as his main defect an inability to form associations. Mental associations, which form spontaneously in the mind of the normal child, are often impossible to the mind of a defective without the aid of most careful, painstaking, and judicious instruction. Associations are noticed very early in the normal infant. Darwin says: "The facility with which associated ideas * * * were acquired seemed to me by far the most strongly marked of all the distinctions between the mind of an infant and that of the cleverest full-grown dog I ever saw."¹ Children of six months have been observed to understand when their hats and cloaks were put on that they were to be taken out. Some idiots do not make this association even after months and years of repetition, and some never associate hunger and thirst and its alleviation with food, so that bread and water placed in sight and reach would not save them from starvation.

The feeble-minded cannot of themselves fill up the gaps in instruction that are filled naturally and perfectly by the normal child. The shortest conceivable step may be impossible to them without guidance. Every lesson, and every step in the lesson, must be under-

¹ "Biographical Sketch of an Infant," *Mind*, Vol. II. p. 285. Quoted by Tracy in "Psychology of Child," p. 69.

taken with the thought of the association habit of each child, its difficulty, its slowness, its imperfection fully in the teacher's mind. That the association habit may be improved by proper attention is evident to all. It is said that Mr. Thring, the eminent English educator, ascribed to Pick's method of mnemonics a great improvement in his own power of thought. The fact doubtless was that a better habit of association had opened up to him a new mental horizon. If such a man can be so greatly helped by attention to habits of mental association, there is good reason to believe that a most careful consideration of this point is due the feeble-minded child from his teacher. Of all children he most needs to be led into good habits of association.

MISCELLANEOUS SUGGESTIONS.

Suggestions from an outsider to those who are engaged in a special line of work often have their greatest value in this, that they came from one who views the work from a different standpoint. All the suggestions offered by the writer in this work are given with the above thought in mind, and simply for what they may be worth.

Speaking entirely from a theoretical standpoint, the phonetic method of teaching reading should be used with many of these children. Many of them are decidedly ear-minded, and this should be taken account of in the reading lessons. The word method taxes greatly the visual memory, and requires the very difficult immediate association of a visual image (of the written word) and an auditory image (of the spoken word) in each case. These associations are rendered mediate and much simpler by the phonic method, and the visual-to-auditory image associations (so difficult to an ear-minded imbecile) necessary in reading are greatly lessened in number. The phonic drill is most excellent in developing clearness of articulation. In the report of the Connecticut Board of Education, 1894-1895, will be found excellent suggestions on the phonic method of teaching reading.

Reading, simply as an accomplishment, should not be taught the feeble-minded. If use will be made of reading during life, if reading can, and will be continued voluntarily in some slight degree at least, well and good; but if it will be abandoned after the school days are over, the energy is misspent. Reading and writing came late in human culture, and it demands a high degree of intelligence to make reading and writing anything more than an accomplishment. Read-

ing and writing are tasks as unsuited to a feeble mind as precise work is to baby fingers. It is far better to give the time to sewing, to housework, to cobbling, to farm work, and the thousand and one other useful things. Parents of feeble-minded children ought to see that there is nothing else so desirable as the ability to do useful work. Literary knowledge, if it does not come at the right stage of intelligence, is weakening rather than strengthening to the mental power, a hard, unnatural, indigestible food for a feeble mind. Many kinds of common work have infinitely more use than school-room accomplishments, and develop more real intelligence in the feeble-minded. "Not what he knows, but what he can do," is doubly applicable to these children. Parents should be impressed with the truth that a man should be measured by his usefulness and not by his knowledge. There is an idiocy of the hand and arm that is far worse than utter lack of book knowledge.

In conducting exercises in "sensorial gymnastics," Seguin's principle, that each sense must be trained both as a function and a faculty, should always be borne in mind. While laying great stress upon the training of each sense as a function, equal effort should be made to develop the sense as a faculty. Upon the development of the senses as functions depends their development as faculties, but the more difficult task in the teaching of the feeble-minded is the proper training of the senses as faculties. The *raison d'être* of sensation is the production of thought, and if it be true that the psychic life of an idiot is prone to stop at sensation, that his deficiency is greatest in the power to transform physiological into intellectual elements, it is this second feature of sensorial gymnastics that requires the more constant thought of the teacher. Great good judgment is necessary for determining to just what extent the intellectual element should be brought out in each exercise, but so far as it can be determined, it should never be neglected.

While the relation of muscular movement to thought is now so universally recognized and considered, it seems almost superfluous to add a word upon the importance of motor training. Every teacher of the feeble-minded recognizes that above the training of the senses, above school work, above everything else in importance comes motor ability. But the great principle in the motor training of the feeble-minded must be insisted upon over and over,—namely, that the chief aim is to enable the child to execute ideas, to make purposive move-

ments for reasons of his own. Imitative movements, movements at command, are all important in their place, but the end of motor training is to get these children to make movements in accordance with some ideal formed in their own minds. The child who desires something and will climb to obtain it has accomplished much more than he who imitates a movement or changes his position at command. Hence the value of games, in which the happy child, alive to some clear, definite ideal in its own mind, moves in execution of its own thought. There is no higher motor training than this for a child. When these child ideals have become the serious, world-needed ideals of useful maturity, the object of motor ability has realized its perfection. Useful creative work is at once the means and the end to the highest motor culture.

Besides the various exercises of smelling, tasting, sorting, and handling blocks, etc., very useful exercises can be devised for the discrimination in touch. A delightful and most valuable training for these children, it seems to the writer, is the handling, (smelling too, and tasting), blindfolded and seeing, of different kinds of fruit—apples, oranges, pears, grapes, bananas, lemons, etc., etc. And how easy to determine a natural reward! These exercises can be extended to different kinds of fur which children delight to stroke, as that of the cat, dog, buffalo, beaver, etc.; different kinds of cloth—flannel, velvet, silk, calico, etc.; grains, meals, nuts, minerals, etc. But it should always be borne in mind that the ultimate aim of such exercises is to train the child to acquire knowledge from sensations.¹

GAMES FOR THE FEEBLE-MINDED.

No one who has ever studied children can doubt the great educational value of play. Feeble-minded children do not play, or if they do, the play is of the very simplest kind, perhaps with blocks, a stick, or some simple toy. There is no plan in their play. They do not make mud pies, build little dams, dress dolls, or shout out in eagerness for "I Spy," "London Bridge," and "Puss in the Corner." The co-ordination of muscular movements, the quickness of thought, the idealization necessary in many games of children, are far beyond a feeble-minded child. Teachers of these children have naturally reduced much of their school instruction to the form of games, and with great advantage. But it seems to the writer that there is a great

¹ Similar exercises have been devised by Dr. Fernald at the Massachusetts School for the Feeble-Minded.

field yet untried in games for feeble-minded children. If a keen interest for games, a real play enthusiasm could be awakened in these children, it would be of the greatest value. Tell me that one of these boys can play a good game of jack-stones, or that he is skillful at base-ball, and I would rather hear it than that he can name all the states of the Union and locate their capitals. The power of thinking quickly, judging, acting, controlling, willing (needed above all things by these children), is necessary for playing certain games, and can find a better field for development here than in any other exercise ever mentioned in a school course. I believe it is not impossible to awaken and develop to a much greater degree than has yet been done the play instincts of feeble-minded children. I have seen much enthusiasm manifested on the play-ground at the Massachusetts School for the Feeble-Minded at Waltham, where much is being done in active games. The play instinct is one of the deepest and most fundamental of the instincts of normal children, and we can go far down the scale of mankind and animals and see that it still holds equally there in the young. It may be that here will be found one of the surest and easiest roads to the development of the powers of feeble-minded children. But to know a game is not to be able to teach it, and no greater tact was ever required of a teacher than that necessary for developing the play side of the feeble-minded child's nature. Many games of the school room are not games at all in the true sense, but are really formal exercises, though, perhaps, rather interesting in comparison to the usual class work. It requires consummate art in the teacher to direct perfectly the games of children.

The following list of games,¹ although some of them may not now be well adapted to feeble-minded children, may offer useful suggestions to the teacher. It is regretted to the writer that no study has yet been made of the development of play in normal infants. Many very valuable facts might be gathered from such a study for the benefit of teachers of the feeble-minded. In this respect, and also in regard to toys and to play (apart from games), this list is deficient.

GAMES WHICH DEVELOP THE POWER OF ATTENTION.

RETURN OR STRING BALL.—A rubber ball attached to an elastic. The

¹ See an article by the writer on "Education by Plays and Games," *PED. SEM.*, Vol. III., No. 1.

elastic is fastened to the middle finger of the right hand and the ball is thrown, returning by force of the elastic.

ROUNDS.

CATCH BALL.—Use soft ball. Children stand in rows or in circle. Alternate rolling, tossing with right hand, left hand, both hands. Opposite player catches and returns or passes the ball on in same manner. Game may be greatly varied.

CAT AND MOUSE.—"Mouse" inside, "cat" outside the circle. Children circle round, hindering with lowered arms the cat from getting in or out, but with raised arms allowing the mouse to pass freely out or in.

BIRDS FLY.—Leader cries "fly," naming any bird or animal, at same time holding up hands. Others hold up hands only in case a flying bird is mentioned. Who misses is out.

FOLLOW MY LEADER.

INTERY MINTERY.—All place forefinger on leader's knee. Leader repeats a counting rhyme, touching a forefinger at each syllable. The finger upon which the last syllable falls must be instantly withdrawn or it will receive a rap.

COME WITH ME.—Children stand in a circle. One runs around the circle (as in Drop the Handkerchief) and touches some one on the back, saying, "Come with me." The two run in opposite directions. Upon meeting, they take hold of hands, swing once around, and then race for the vacant place.

CIRCLE BALL.—Passing ball quickly around circle, handing to next or tossing.

BALLOON BALL.—Use light, large rubber ball. Alternate rolling, tossing, throwing, kicking, right hand, left hand, both hands. Vary.

BIRD CATCHER.—Children sit in circle. One stands within the circle. Each takes the name of some bird. Teacher or leader tells or reads story, bringing in the names of the birds. At the mention of her name, one must raise hands and bring them down quickly. At mention of owl, all place hands behind back, holding them there until another bird is mentioned. The catcher endeavors to catch a hand whenever one is moved.

BALLOON BALL.—Same as above. Also keep ball in the air by batting upward with the hand until a miss is made, or keep bounding it by batting it downward against the floor. Alternate hands.

SIMON SAYS, THUMBS UP.

FISHERMAN.—Tie string to a stick and make slip-loop at other end. Loop is placed in centre of table. At words "Your fish," each must put finger in the loop. At words "My fish," finger must be quickly withdrawn, or sudden jerk will snare them.

SCHOOL BALL.—Use soft ball. Count out for turns. No. 1 retains ball so long as he can catch it in accord with the rules. When he misses, he must step five paces away and let No. 2 throw ball at his back. If No. 2 misses he loses his turn and gives ball to No. 3, who proceeds as No. 1. 1. Throw up with one hand, catch with both. 2. Throw with both and catch with both. 3. Throw with both, catch with one. 4. Throw with one and catch with other. 5. Throw to ground and catch on bounce, in the different ways. 6. Bat upward before catching. 7. Throw upward, and, before catching, (a) clap hands, (b) bow once, (c) kneel once, (d) jump in the air, (e) jump forward, (f) jump backward, (g) kneel to right, (h) kneel to left.

DAYS OF THE WEEK.—Each takes the name of some day. One throws against the wall and calls out Monday or some other day. The one representing the day catches the ball. If he misses, others must scamper away before he has time to throw the ball and hit one of them. Who misses or is hit loses a point.

GENTEEL LADY.—One says to a neighbor, "Good-morning, genteel lady, always genteel: I, a genteel lady, always genteel, come from that genteel lady (pointing), always genteel, to tell you that she has a bird" (or anything you like). The one addressed repeats exactly and adds something else about the bird, and so on.

Buzz.—Count around circle. Buzz is always substituted for some chosen number and its multiples. For example, 1, 2, 3, 4, buzz, 6, 7, 8, 9, buzz, etc.

RAILROAD GAME.—Each takes name with something associated with railroad. One relates story. At mention of rails, "Rails" must rise and extend arms in front. At mention of newsboy, "Newsboy" must call out his papers, etc., etc.

CORN AND BEANS.—Large number of cards with questions in arithmetic, geography, history, or whatever you like, written on them. Same number of cards with answers. Leader reads question. Who holds the answer must cry "corn." The others cry "beans." If one cries "Corn" correctly before any one cries "Beans," he scores a point. Corn and beans may be used as counters.

SHOT-BAG JUMPING.

GAMES WHICH TRAIN THE OBSERVATION.

I SPY.

BLANK AND LADDER.—I Spy by sides.

HIDE IN SIGHT.—Hide something in room, but so that it is not entirely concealed if one looks sharply from all points of view.

ALPHABET GAMES.—Explained under reading.

HIDE THE HANDKERCHIEF.—Handkerchief hidden in the room to be found.

MAGICAL MUSIC.—Like Hide the Handkerchief or Hide the Thimble. Teacher plays the piano loudly or softly as a hunter nears the object.

PARTS.—Naming different parts of an object, as of a house, book, table, etc., without giving letter. Play as above.

NAUGHTS AND CROSSES.—Tit-tat-to.

SLICED MAPS.—

DOMINOES.—Simpler Games.

TOUCH WOOD, TOUCH IRON.—A tag game.

IDENTIFICATION.—Several children conceal all but eyes behind curtain or mask, or conceal all but part of face or hand. The others guess who each one is.

STEALING STICKS.—Sticks are scattered about "keeper's ring." Children watch opportunity to steal a stick without being caught.

PARCHESI.—And other games similar.

BURIED WORDS.—"Somewhat back from the village street, stands an old-fashioned country seat." Find a body of water and a country dwelling. Ans., Sea and Villa. Fruit, flowers and animals are good words to conceal.

LOTO.—

OBSERVATION.—Players pass around table or desk upon which are numerous articles. They then endeavor to write a list of all the articles.

DICTIONARY.—Making all words possible out of the letters of a large word.

BACKGAMMON.—

FOX AND GEESE.—

PHYSICAL TRAINING.

ROUNDS.—RETURN BALL.—CATCH BALL.—CAT AND MOUSE.

SAIL THE SHIP.—Two or four, two by two, take hold of hands and swing swiftly around.

CUSHION DANCE.—All form a circle about a cushion, taking hold of hands. Each tries to pull some one against the cushion.

HONEY POTS.—Select honey merchant and purchaser. Rest squat with hands clasped under knees. Two larger children take each pot by the arms and swing it. If the honey pot breaks its hold, it is poor honey.

LONDON BRIDGE.—Ending in tug-of-war.

BROWNIE TEN PINS.—

ROUNDS.—SAIL THE SHIP.—SQUAT TAG.—RACING.—PHILANDER'S MARCH.—March to singing or music around the room, through the halls, up stairs and down stairs.

HERE I BREW AND HERE I BAKE.—Young child's game of Bull in the Ring.

HUNT THE FOX.—Children stand in rows by couples. The fox and the hunter at the head start and run down, in and out the lines, the hunter pursuing the fox; when the fox is caught, they take their places at the foot.

HAWK AND CHICKENS.—One is a hawk or witch, another a hen, and the rest are chickens. A chase game.

DARBY JIG.—Hopping dance. Children grasp hands under knees, and describe triangles and squares on the floor to the music.

BEAN BAGS.—FABA GABA.

HUNT THE RING.—Ring slipped along circular rope under the hands of the children quickly. One in the centre tries to discover the ring.

RING TOSS.—

DUCK ON A ROCK.—Each has a stone. One places his stone as a duck upon a block or rock. Others stand in a line and throw at the duck. Whoever is tagged by the "tender" before he can return to the line after picking up his stone must be "tender." The "tender" cannot tag when his duck is off the rock.

BULL IN THE RING.—Players form a circle with one in the centre, who tries to break through the ring.

JACK-STONES.—MARBLES.—WALKING ON STILTS.

COCK FIGHTING.—Boys squat grasping hands under knees, then hop at each other, trying to upset one another.

KING'S CASTLE.—King takes possession of a castle. Others by fair pulls and pushes try to take possession of his realm.

BASTE THE BEAR.—Bear has a ring marked on the ground. Others

with knotted handkerchiefs attempt to beat the bear. The bear springs after them, but cannot leave the circle.

HOP SCOTCH.—JUMPING ROPE.—

HOPPING BASES.—King in the centre between two bases. Whoever leaves a base must hop to opposite base. The king can pursue only by hopping.

FOX AND GEESE.—Tag game. Fox and geese run in marked out paths.

CROSS TAG.—

BOUND HANDS.—A game of tag. Goals at opposite ends of playground. Players run from one to the other at a signal from catcher. When one is caught he joins hands with catcher, and they chase hand in hand. Each one caught joins the line.

SNAP THE WHIP.—Players take hold of hands, forming a long line, and run rapidly. Leader suddenly stops, and the line is drawn up with a jerk, requiring much strength to keep from letting go of hands.

FUNGO.—One bats "flies." When one of the others catches three flies, he takes his turn at batting.

WICKET.—One bowls at a wicket, the other guards. Several may play.

TUG-OF-WAR.—WRESTLING.—

BATTLE FOR THE BANNER.—Two sides with captains. One has possession of a part of the playground, best a hillock, and floats a banner. The other side strives to get possession of the banner.

BUCK, BUCK.—One places his head against a wall, another mounts his back and holds up certain number of fingers, saying: "Buck, Buck, how many fingers do I hold up?" If the "Buck" guesses correctly, the other becomes "buck."

HUNTING TAG.—Hunter and rabbits. Hunter tags rabbit three times and rabbit becomes a hound. Hound can catch and hold a rabbit, but hunter must come and tag.

BASE BALL.—

PITCH STONES.—Two boys alternate in pitching stones at one another's.

GIANT STRIDE.—From a high thick pole are suspended ropes reaching to the ground. These are fastened so as to turn around the top of the pole. Players grasp their ropes and run around, swing, jump, vault, etc.

FOOT BALL.—American game.

LEAP FROG.—Jumping.

TWISTING STICKS.—Two grasp a round stick and raise it over their heads. Then the stick is brought down below their waists. The sticks must turn in the hands of one.

PULLING STICKS. HAND WRESTLE. WALKING CHAIR.

KNIGHTS.—The knights ride upon the shoulders of other boys and attempt to unseat each other.

LEAP FROG. BASE BALL. QUOITS. PUTTING STONE. THROWING POLE. PRISONER'S BASE. JUMPING.

PARAPHERNALIA OF THE PLAY-GROUND.¹

A very important feature of an institution should be the paraphernalia of the play-ground. The play-grounds for feeble-minded children should have:

1. Swings. 2. Teeters. 3. Sand-piles, with toy shovels, rakes, pans, carts, etc, etc. 4. Circular walk (on the boys' ground large enough for racing). 5. Fox and Geese Track. 6. Giant Swing. 7. Base-ball Diamond. 8. Foot-ball Goals. 9. Roll Hoops, with sticks. 10. Balance Beams. These are made of one-inch planks, set edgewise upon the ground and fastened with brackets or pegs. The height may be increased by setting blocks under the ends. Several may be placed parallel if desired. The children walk along these beams holding hands or alone. 11. Quoit Pegs and Quoits. 12. Stake and Rings for Ring-toss. 13. Spring-board. Children should spring into dry, clean sand, or a space sufficiently large may be dug out and filled in with sawdust or tan bark. 14. Sand-bags. 15. Jumping Pole, a pole of seven or eight feet long, about $1\frac{3}{4}$ inches thick, tapering a little at each end. 16. Push-pole, a pole of hard wood, 8 feet long, $1\frac{1}{2}$ inches thick; also broom handles for pulling sticks, stick push, etc. 17. Bean-bags, with Faba Gaba board. 18. Jumping Standards, with string and weights. 19. Stilts. 20. Tug-of-War Rope. 21. Medicine-Ball. 22. Jump-ropes.

In closing I desire to express my obligation to Prof. Sanford and Prof. Hodge for aid and suggestions given me, and especially to President Hall and Dr. Burnham for their continual help, kindly direction and encouragement. I am under great obligation to Dr. Burnham also, for his most painstaking examination and valuable criticism of my manuscript. I am much indebted, likewise, to Supt. Walter E. Fernald, of the Massachusetts School for the Feeble-Minded at Waltham, for timely criticism and for affording me every facility in his power in my study of the children under his charge. I desire also to express my thanks to the teachers, matrons and attendants of the same institution who kindly assisted me in my observations and experiments.

¹See "Physical Exercises of the Play-ground," by Carl Betz, Chicago, 1894. Also Cyclopædia of Games and Sports, by Champlin and Bostwick, New York, 1890.

The Journal of Psycho-Asthenics.

VOL. II.

MARCH, 1898.

NO. 3.

A quarterly journal devoted to the education and care of the Feeble-Minded, and the care and treatment of Epileptics. Published under the auspices of the Association of Officers of American Institutions for Feeble-Minded.

EDITOR-IN-CHIEF:

A. C. ROGERS, M. D., - - - Faribault, Minn.

ASSOCIATES:

W. E. FERNALD, M. D.,	-	-	Waverly, Mass.
A. W. WILMARTH, M. D.,	-	-	Chippewa Falls, Wis.
F. M. POWELL, M. D.,	-	-	Glenwood, Iowa.
M. W. BARR, M. D.	-	-	Elwyn, Pa.

Address: JOURNAL OF PSYCHO-ASTHENICS, Faribault, Minn.

(Entered at the Postoffice at Faribault, Rice Co., Minn., as second class matter.)

EDITORIAL.

SENSATIONAL LITERATURE.

Society at large craves sensation, and the romance is always more popular than the essay. While such literature is always entertaining and sometimes instructive, it is occasionally deplorable when it deals with subjects of scientific interest, as it strongly impresses our minds with its subject while its inaccuracy makes it worse than valueless.

Not long since a New York physician published a thrilling account of studies on the action of the cells of the human brain, and actually illustrated his article with a picture of the microscope arranged for the study of these tiny cells through a hole, cut for the purpose, in the skull. Any person who realizes the delicate adjustment of a high power microscope must see how the natural move-

ments of the living brain would make such a study absolutely impossible. Equally rash and unfounded are the statements regarding the restoration of idiots as a class to the intelligence of normal people. Attention is forcibly called to this in the last annual report from Elwyn, Pennsylvania, quoting from an article widely published and probably read by many thousand people, and written by an inexperienced man who wrote in a very interesting and readable manner some amazing absurdities. While the improvement of the feeble-minded under training is very marked and often borders on the marvellous, still, the following statement, which is quoted from the article in question, is really grotesque:

“Through its gate is constantly tramping inwards an army of staring soulless eyes, of flat or conical heads, of watery, open mouths; clumsy, listless, stupid soldiers.”

“After a longer or shorter series of years, this same army marches forth again into the world, little inferior, and, perchance, equal to its average citizens.”

What shall we do in this matter? We can no more follow and eradicate the effect of such exaggerations, written for a salary with an utter carelessness as to accuracy, by irresponsible people, than we can exterminate the weeds from our fields by picking up the seeds. A portion of the harm done may be possibly neutralized by placing the exact truth before the people, in legitimate publications, whenever practicable, and leaving the issue with time.

A. W. W.

FUTURE OF THE IMBECILE.

Much confusion still exists in the public mind regarding the future of the imbecile. The opinion largely prevails that the school for feeble-minded is an institution especially designed to remove a temporary cloud from the mind of the mentally defective, and in the end he comes forth as miraculously, if not as speedily, restored as in the early days of the Christian era, when the Divine Healer made glad the hearts of men by his presence and power.

No one experienced in the care of the feeble-minded could say

that he "cures" the imbecile: that he can develop one whose powers are crippled by an inherently weak brain or a brain which has been injured by the effects of disease, into an activity rivalling that of a healthy, capable organ.

Institutions may occasionally graduate a case where the faculties are nearly or quite normal but are simply delayed in their development, but such cases are not frequent. As a rule he can only make a study of the most promising lines on which to base instruction and training, and by individual training develop the subject along these lines without hoping to develop all his charges' mental faculties into the active and consistent whole so essential to success in these days of progress and struggle.

This is not such a discouraging view of the case as might appear at first sight. That imbeciles may be vastly improved is proven in every institution in the country. They become clean when previously careless; learn useful occupations by which they become more or less self-supporting. They increase their general knowledge to an extent that vastly increases their appreciation and enjoyment of the pleasant things of life. They know the pleasure of the society of those of their own grade of intelligence, instead of struggling along in that hopeless inferiority so fatal to the development of self respect. They are saved from temptations which they have no strength to resist. They are kept from forming marriages of whose responsibilities they have no conception.

But, supposing they could leave the care of an institution and return to the care of their friends, or become competent to go out in the world by themselves and earn some kind of a living, how far should they be permitted to do so?

If naturally vicious, never. They are sure to cost the community far more at large than when under protection. If their infirmity dates from traumatic injury or acute disease, the weakness is hardly transmissible, and no especial danger can follow their return to the care of their friends; and even if of sufficient intelligence to marry, their weakness will probably not be transmitted, provided they have inherited no family taint.

With a much larger proportion this family taint exists, and society has an absolute right to expect that they shall not be allowed to reproduce their kind. Examples are not only known, but are common, when families grow from two to four, six, eight, or more, who are more or less dependent. The growth of their number is both amazing and alarming to the taxpayer.

The comfortable care of the marriageable feeble-minded would curtail this increase definitely and at once, and the assumption of

their life care would soon yield its return in the diminished reduction of births of defectives.

That they should be educated appears to be the universal opinion of those best fitted to judge in the matter. While it is impossible to eradicate a weakness which is theirs by heredity, and which is grafted into the very structure of their being, it is also true that they can be educated and their usefulness and happiness increased often to a wonderful extent. One has only to visit an institution for these defectives to fully realize this fact. They claim, therefore, the same privilege as accrues to every child in this republic, and which is cheerfully granted to other defective people. No one challenges the right of the blind to an education which will fit them for a sphere of usefulness. Equal justice demands the same right for this class of children, equally helpless and equally blameless for their misfortune.

The future of the larger share of them is best fixed in a community by themselves, with congenial surroundings, a life free from temptations or excesses, to which they readily yield. Their average life is not long, for they age rapidly as a rule and are very susceptible to phthisis and other lung affections.

The imbecile woman of the higher grade, in an institution, no longer has the necessity of marriage in order to live. The labor of the feeble-minded on the farm or in the household constantly tends to diminish their cost of maintenance instead of their increase constantly adding to the public burden. Here they can live out their simple lives amid congenial surroundings in carefully classified groups. They can be educated along lines tending to give them the greatest usefulness and enjoyment, instead of living an inferior, discouraging existence in the community at large. The need of curtailing the number of the defective classes by preventing their increase will be better realized when we consider that the cost of maintenance of the dependent classes in one of our largest states increased in ten years two hundred per cent., and there is no reason for supposing that the increase in relative number in other states varies largely from this ratio.

A. W. W.

IN reply to the telegram of good wishes sent to Dr. Stewart during the meeting of the Association at Orillia, Ont., last summer, he replied to one of the signers, as follows: "Nothing has ever so pleasantly affected me as the telegram conveyed through you from my friends assembled at Orillia. I assure you, and I wish you to assure every one of them, of my grateful appreciation of their kindness and thoughtful interest in my behalf. I may never be able to attend another meeting of the dear old Association, but I carry in mind pleasant memories" (of the members, naming each,) "which will be a source of everlasting joy to me during the remainder of my life."

(The signature of this letter is reproduced on the frontispiece.)

NOTES AND ABSTRACTS.

THE WILL OF DR. E. C. SEGUIN, who died in New York on Feb. 19th, 1898, leaves to pathological institutions his library, instruments and objectives.

The New York Academy of Medicine secures an oil painting of his father, (Dr. E. O. Seguin); an autograph letter from Pope Pius IX, dated Dec. 16, 1847, in which his Holiness compliments his father on his work for the amelioration of the condition of backward and imbecile children; a bronze medallion of Charcot, given to Dr. Seguin by Charcot himself; a large photograph of Brown-Sequard and his special collection of monographs and pamphlets on the nervous system, nearly one hundred in number, and uniformly bound in eight volumes. Dr. Seguin states in his will that he was thirty years in making this collection, which contains many publications that cannot be duplicated. It is provided that this collection be kept in a special case, a double catalogue made, and it is requested that an effort be made to secure additions to the collection. All other books in his collections on pathology and the nervous system, not otherwise disposed of, are also left to the Academy of Medicine.

To the Pathological Laboratory of the Alumni Association of the College of Physicians and Surgeons he leaves all his instruments and appliances for the study of the nervous system, all his microscopes and objectives, microtomes, knives, models and charts; his collection of pathological specimens and all the books in his library relative to the anatomy and physiology of the nervous system. This collection, which contains rare volumes and is very valuable, is given in charge of the Director, who is to place it in a special book case and set it apart, and also cause a special catalogue to be made. It must remain intact and not be allowed to be taken from the laboratory for any purpose. If the Alumni Association of the College of Physicians and Surgeons will not accept the charge with the conditions imposed, the library is bequeathed, on the same conditions, to the New York Academy of Medicine.

A crayon portrait of his father is given to the New York State Asylum for Idiots, at Syracuse, N. Y.

He bequeaths to his wife all the rest of his property, which includes a plot at Woodlawn, and sets of medical journals. The latter he desires that she shall sell for her own benefit.

—*New York Daily Tribune*, Feb. 26, '98.

THE DANGER OF EXPERIMENTAL PSYCHOLOGY is vigorously discussed by Prof. Münsterberg, of How-

ard, in the *Atlantic Monthly*. His criticism is directed not against this line of investigation *per se*, but first, against the prevalent misconception of its possibilities, and, second, which is of more importance to us, the erroneous notion that teachers can deduce rules for practical professional work from these experiments. Incidentally he alludes to child study, "where the dangers are not less threatening. * * * * It has always been my conviction," he says, "that love, and tact, and patience, and sympathy, and interest, are more important for the teacher than any psychological observations he can make on children, and that these observations are natural enemies of his instinctive emotional attitudes, because they dissolve the personality into elements, while love and tact have nothing to do with a bundle of elements. * * * * If you are interested," he adds, "in the subtle studies of modern laboratory psychology, devote your free time to it. Certainly there are few sciences so attractive. Study it as you would study geology, or astronomy, or Greek history, or German literature, but do not expect that it will help you in your work as teachers more than astronomy or geology would help you. * * * * In the hands of the professional psychologists, experimental results are important suggestions for a more subtle and more refined qualitative analysis than the pure observation allowed. In the hands of the teacher, those results are odd bits and ends which never form a whole, and which have no meaning in real life. * * * * I do hope for a high, and great, and brilliant progress of experimental psychology, but I do hope still more for a wonderful growth of the educational systems in this country; but I feel sure that the development of both will be the stronger and sounder and greater, the longer both education and experimental psychology go sharply separated ways, with sympathy, but without blind adoration for each other."

A NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TRAINING OF EPILEPTICS is the object of a movement among those most interested, led by Dr. William P. Spratling, of Sonyea, N. Y. A meeting is called in New York City, to be held at the Academy of Medicine, on Tuesday afternoon at three o'clock, May 24, 1893.

AN EPILEPTIC COLONY has finally been provided for by law in New Jersey, and \$15,000 is appropriated to inaugurate the work. Dr. J. T. Smith, of Bridgeton, and Mr. S. O. Garrison, of Vineland, have for years been among the earnest workers in this movement, and as a recognition of the interest of the latter, Governor Griggs sent him the pen with which he signed the bill.

PRIVATE SCHOOLS.

THE SEGUIN SCHOOL FOR CHILDREN OF ARRESTED DEVELOPMENT.

Nineteenth Year,
Twenty-five Pupils,
Thirteen Teachers.

370 Centre St., ORANGE, N. J.

J. Q. A. STEWART, M. D.
JOHN P. STEWART, M. D.
STEWART HOME,
Farmdale, - Kentucky.

For the care and training of Persons of
Backward Mental Development and the
treatment of Nervous Diseases.

MISS BAKER'S PRIVATE SCHOOL

—for—

Backward and Nervous Children.

MISS LAURA BAKER,

1826 Chicago Ave. Minneapolis, Minn.

1848.

1898.

PRIVATE SCHOOL,

Barre, - Massachusetts.

DR. GEO. A. BROWN.

THE FONT HILL PRIVATE INSTITUTION

—for—

Feeble-Minded and Epileptic Children.

Established in 1886.

SAMUEL J. FORT, M. D., Supt.

P. O. Address, Ellicott City, Md.

Orders will now be received for the

SECOND DECENNIAL VOLUME

of Proceedings, 1886-1896. They are bound uniformly with the first volume, in half morocco, and sent post paid to any point in the States at \$2.25 per volume.

There are still a few copies of the *First Decennial Volume* on hand, and for sale at \$2.25 per volume.

These two books contain the principal literature on Idiocy published in English during the last two decades. Send orders to

DR. A. C. ROGERS,
Faribault, Minn.



The ordinary emulsion of cod-liver oil, for nutritive properties, depends entirely upon the proportion of cod-liver oil present. Irish moss and acacia are non-assimilable gums—a burden to the digestive organs. **Parke, Davis & Co.'s Egg Emulsion of Cod-liver Oil** is all food. It contains 40 per cent. by volume of pure cod-liver oil, emulsified only with eggs, and flavored with a fine quality of brandy. Every ingredient a nutrient.

Journal of Psycho-Asthenics.

Devoted to the

CARE, TRAINING AND TREATMENT OF THE FEEBLE-MINDED
AND OF THE EPILEPTIC.

Vol. II.

JUNE, 1898.

No. 4.

Published Quarterly at Faribault, Minnesota.

SUBSCRIPTION, \$1.00 PER ANNUM.

SINGLE COPIES, 30 CTS.

Entered at the Post-office at Faribault, Rice Co., Minn.,
as second class matter.

THE JOURNAL OF PSYCHO-ASTHENICS.

The only periodical in the English language of general circulation devoted exclusively to the interests of the FEEBLE-MINDED and of EPILEPTICS. Published under the auspices of the Association of American Institutions for Feeble-Minded. OFFICERS: Geo. Brown, M. D., Prest., Barre, Mass.; Mary Dunlap, M. D. Vice Prest., Vineland, N. J.; A. C. Rogers, M. D., Secy. and Treas., Faribault, Minn.; Mrs. Isabel Barrows, Boston, Mass., Official Stenographer.

Subscription \$1.00 per annum; single copies 30c. *Special rates for re-prints and quantities of any one issue for distribution.* Address communications to The JOURNAL OF PSYCHO-ASTHENICS, or to Dr. A. C. Rogers, Faribault, Minn.

CONTENTS FOR JUNE, 1898.

ORIGINAL ARTICLES:—

The New Institution for Feeble-Minded of Western Pennsylvania	128
The Epileptic Child—L. L. Glover, A. M., M. D.	138
Locating Needles by the X-Ray—A. C. Rogers, M. D.	140

SELECTED:—

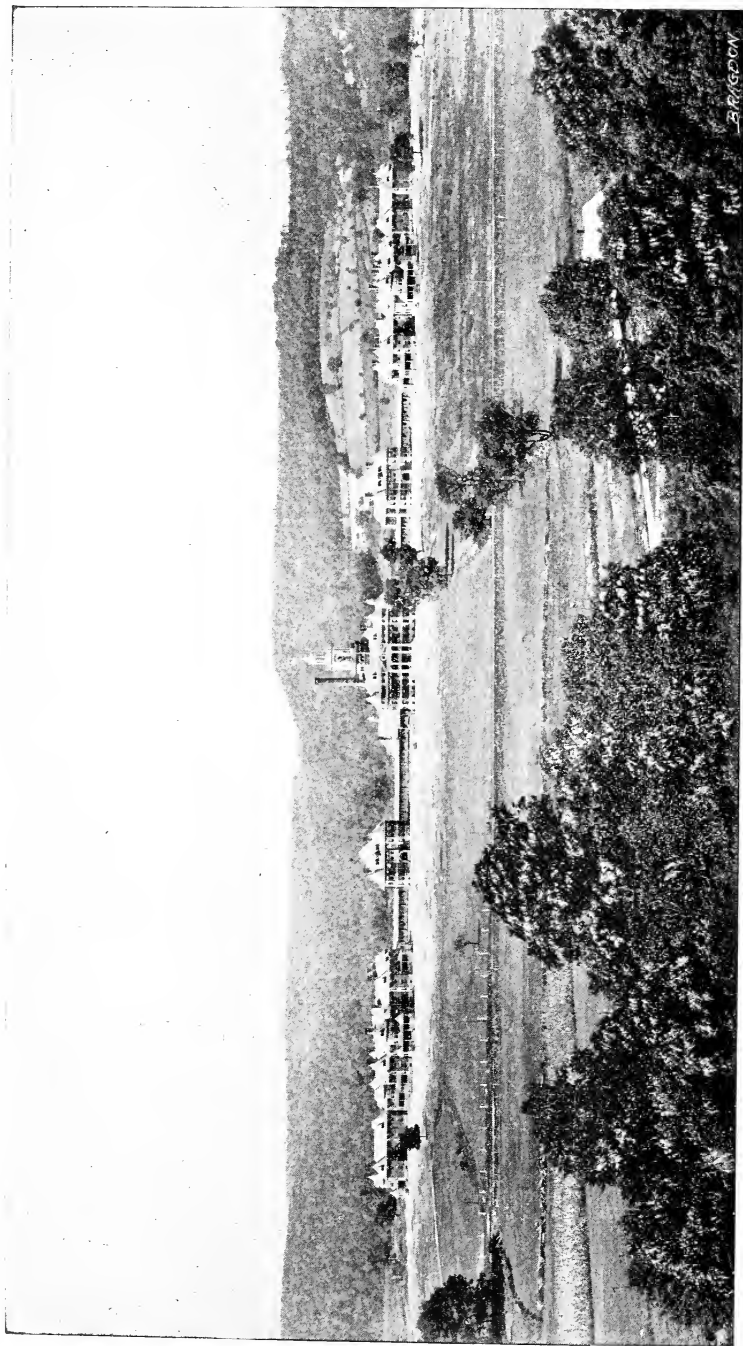
Arrangement and Aims of the Preparatory School in our Institutions for Feeble-Minded—Fr. Frenzel	143
--	-----

EDITORIAL:—

Does the Education of the Feeble-Minded Pay?	152
The Vineland Meeting	154
The Meeting for 1899	154
Death of Dr. E. C. Seguin	155

NOTES AND ABSTRACTS:

A State Board of Control.—A National Society for the Study of Epilepsy and the Care and Treatment of Epileptics.—The New Building of Chippewa Falls Home for Feeble-Minded.—A Conference of Officers and Teachers of the Institutions for Imbeciles in Denmark, Sweden, Norway and Finland.	158-160
--	---------



STATE INSTITUTION FOR FEEBLE MINDED OF WESTERN PENNSYLVANIA

Journal of Psycho-Asthenics.

VOL. II.

JUNE, 1898.

NO. 4.

ORIGINAL ARTICLES.

THE NEW INSTITUTION FOR FEEBLE-MINDED OF WESTERN PENNSYLVANIA.

Out among the hills of Venango county, Pennsylvania, is now the first and only institution for feeble-minded in this country that was planned, built and organized from the start upon a comprehensive scale. The inception of this institution originated with Dr. Isaac N. Kerlin, who, together with Malcolm H. Dickinson, President of the Board of Public Charities of Pennsylvania, brought the subject before that Board at a meeting held at Harrisburg on June 1st, 1892, when the following preamble and resolution was passed:

Whereas: There is a large number of idiotic and feeble-minded persons within the border of this commonwealth who are not now provided for; and

Whereas: It has been demonstrated that a large proportion of this class, if taken in childhood, are susceptible of great improvement under training, when placed in institutions adapted to their care, therefore, be it

Resolved: That the legislature of Pennsylvania be advised to establish a State Institution for the care of the idiotic and feeble-minded children in Western Pennsylvania, to be located on the western slope of the Allegheny mountains; and be it further

Resolved: That it is the opinion of this Board that one of the essential features of this institution should be the development of the agricultural industry, for the practical or entire support of a large number of inmates; also the development of such trade industries as shall be within the compass of the inmates' capacity.

After the preamble and resolutions were read in the Legislature, a bill authorizing the organization of the proposed institu-

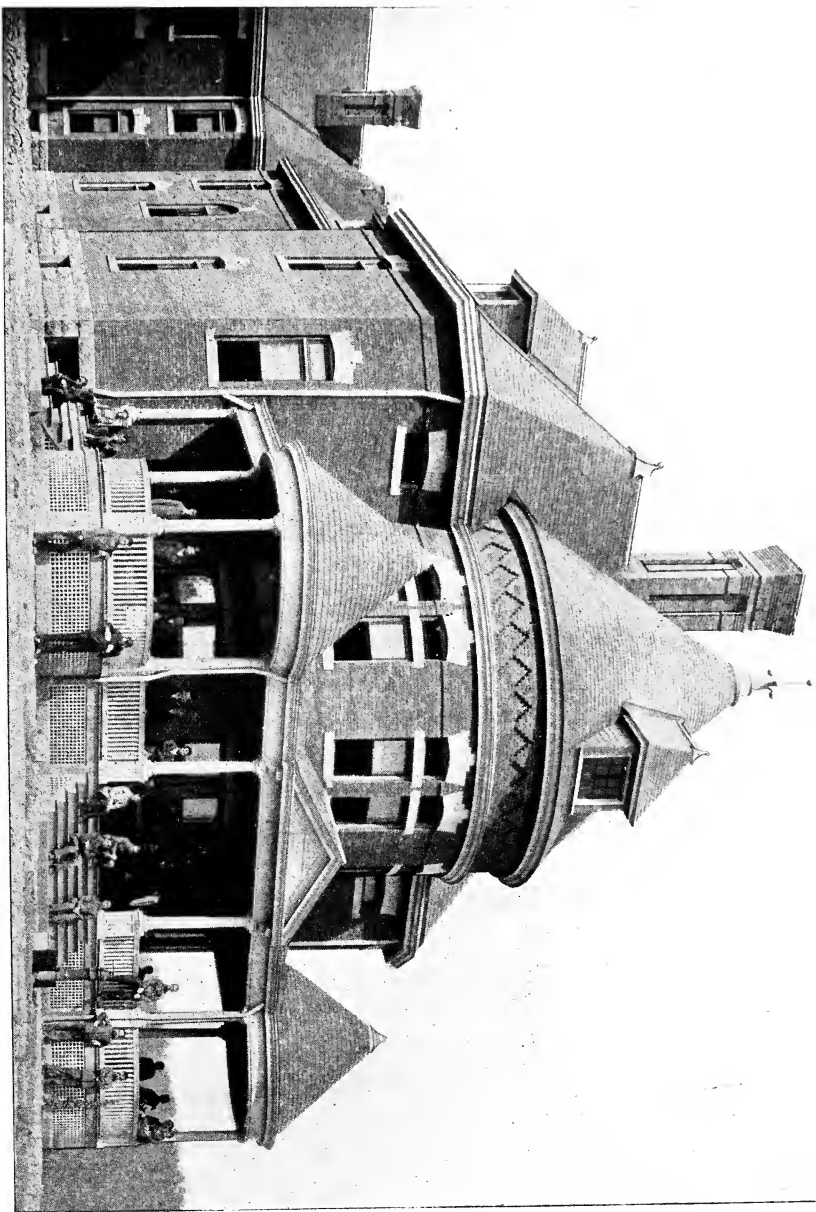
tion was introduced, and, with little opposition, enacted into a law that now governs the State Institution for Feeble-Minded of Western Pennsylvania.

This bill provided that the Governor should appoint five commissioners, who should serve without compensation, to select a site and build an institution for the accommodation of the feeble-minded children of western Pennsylvania. They were instructed by the Act to select a tract of land not less than 500 or more than 1,000 acres in extent; the land to be arable, well adapted to the preservation of health and to the occupation and maintenance of the inmates of the institution; it to be provided with an edequate supply of good water and natural facilities for drainage from the buildings. The same bill appropriated \$250,000 for purchasing the ground and commencing the erection of the buildings. In conformity with this Act the Governor appointed the following commission:

C. Heydrick, Franklin, Pa.; Norman Hall, Sharon, Pa.; Geo. A. Jenks, Greenville, Pa.; W. Horace Rose, Johnstown, Pa.; Geo. W. Guthrie, Pittsburg, Pa.

The commission, after visiting many tracts of land in Western Pennsylvania, decided upon the present site for the institution as peculiarly well adapted to its needs as put forth in the act creating the institution, and this choice was commended and approved by the State Board of Public Charities. The site chosen consists of 870 acres of land situated at Polk, Venango county, Pennsylvania, six miles from Franklin on the Franklin branch of the L. S. & M. S. Ry. This tract of land was purchased for \$24,750. It is 1,132 feet above sea level, admirably situated for drainage, and a large proportion of the land well adapted for farming. An abundant supply of pure water is brought by gravity from mountain springs two miles distant and at an elevation of 190 feet above the buildings. The protection of the supply has been secured by the purchase of a separate tract of 70 acres of land in a state of nature, and the right of way for a pipe line secured from this tract to the buildings.

Plans for the buildings were submitted by a number of architects. The one presented by Architect F. J. Osterling was select-



COTTAGE NO. 5—STATE INSTITUTION FOR FEEBLE-MINDED OF WESTERN PENNSYLVANIA



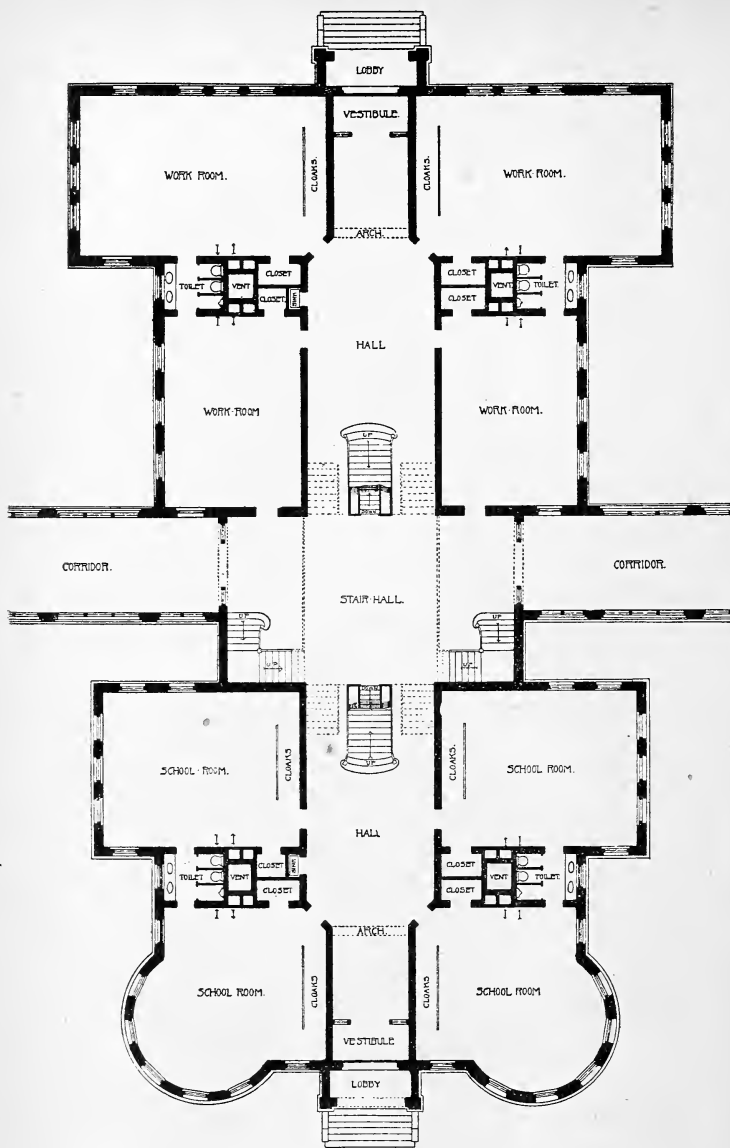
ed as the best and to Mr. C. A. Balph, the lowest bidder, the work of constructing the main group of buildings was awarded; the barn and cold-storage buildings being constructed by Wallis & Carley. The principal buildings are so connected by covered corridors that access from one to another may be had without going out of doors. The buildings are heated by steam from one common plant and lighted by electricity, generated in the power house. The total cost of construction was \$557,000.

The buildings now completed consist of an administration building, two educational school buildings, one industrial school building, containing a sloyd room, shoe shop, tailor shop, mattress, hammock and mat making shops, a gymnasium, called Kerlin Hall, a building providing living quarters for the teachers, two dining room buildings, kitchen and bakery, laundry, two buildings for storage of clothing, cold-storage building, work shop, sixteen cottages for the inmates and two barns.

The control of the institution is vested in a Board of nine trustees appointed by the Governor. The first Board appointed consisted of Messrs. C. Heydrick, Norman Hall, A. E. Patton, Samuel M. Jackson, W. T. Bradberry, J. J. Spearman, John A. Wiley, George W. Haskins and Matthew Griswold. The first meeting of the Board was held at the institution on the afternoon of May 20th, 1896, when the organization and equipping of the institution was planned. The \$35,000 appropriated by the legislature at the session of 1895 for the purpose of insuring, furnishing and equipping the institution being inadequate, the legislature in 1897 made an additional appropriation of \$80,000 to complete the work.

On August 21st, 1896, Dr. J. Moorhead Murdoch was elected Superintendent, and on January 22d, 1897, the institution was transferred from the Building Commission to the Board of Trustees. Fire was at once placed under the boilers and the building cleaned and equipped with the necessary apparatus and furniture. On the 21st of April the school opened with an attendance of 153 children, who were transferred from the Pennsylvania Training School for Feeble-Minded Children, Elwyn, Pa. During the summer 200 more children were received, making a total of 353 inmates for the first fiscal year.

• INDUSTRIAL BUILDING •



SCHOOL BUILDING •

• WESTERN PENNA. STATE INSTITUTION •
 • FOR •
 • FEEBLE-MINDED •
 • FOLK • VENANGO CO •

• J. D. OSTERLING •
 • ARCHT. CT •
 • PITTSBURG • PA •

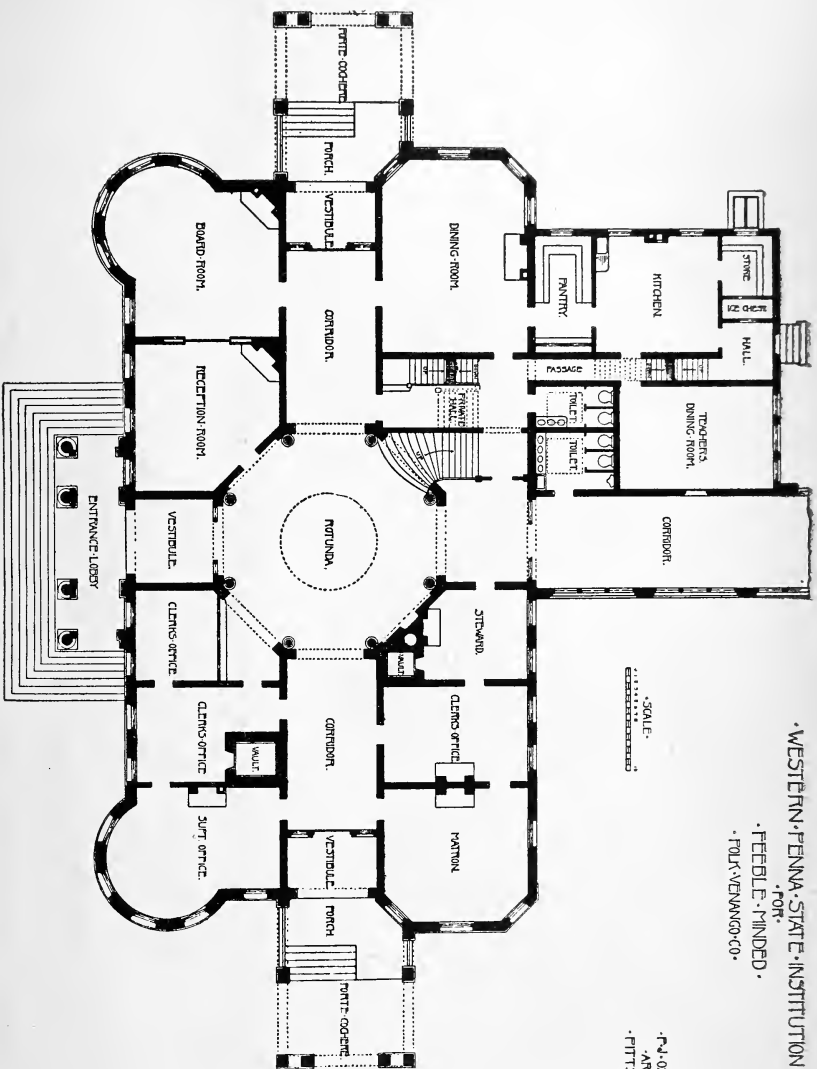
• SCALE •
 1" = 10'-0"

• WESTERN PENNA. STATE INSTITUTION •

• FOR •
• FEEDLE MINDED •
• FOLK VERNACULO •

• J. A. OSTENLING •
• ARCHTCT •
• PITTSBURG • PA •

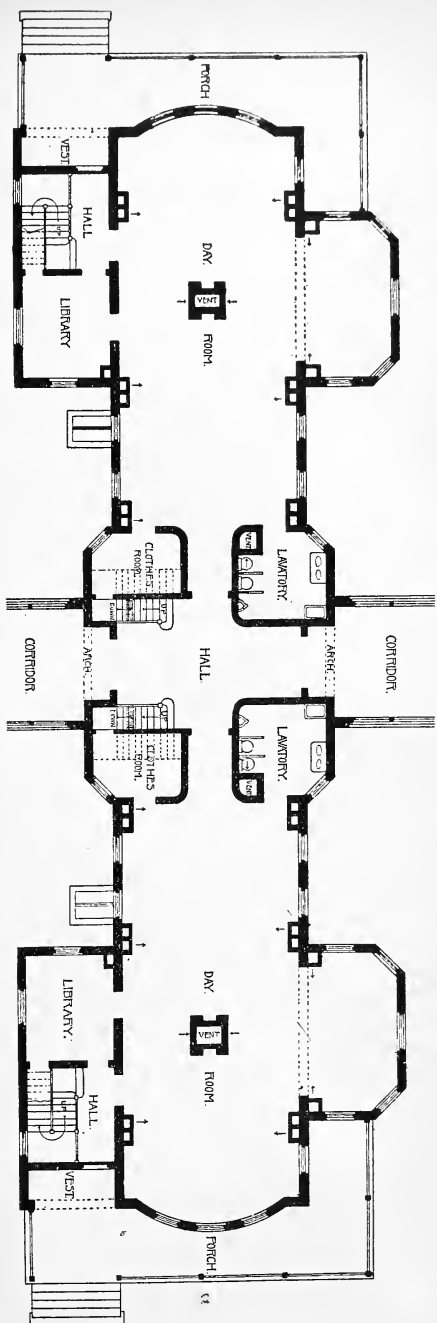
• SCALE •
1" = 10' - 0"



• ADMINISTRATION BUILDING •



• FIRST FLOOR PLAN •



• COTTAGE •

• WESTERN PENITENTIARY STATE INSTITUTION •

• FORT •

• FEEBLE-MINDED •

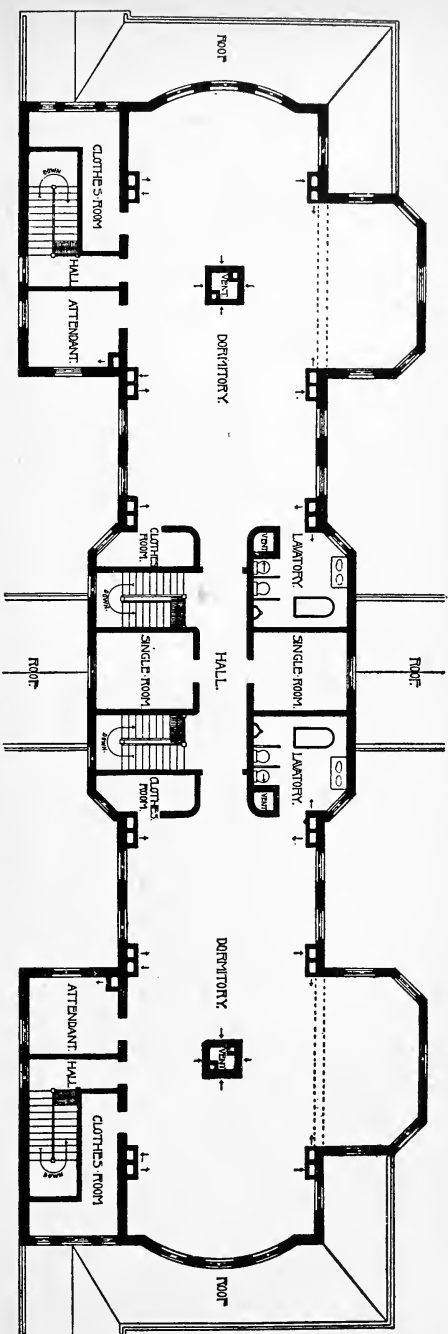
• FOLK-VENANGO CO •

• SCALE •
 0 10 20 30 40 50 60 70 80 90 100

• PAOSTERLING •
 • ARCHITECT •
 • PITTSBURGH-PA •



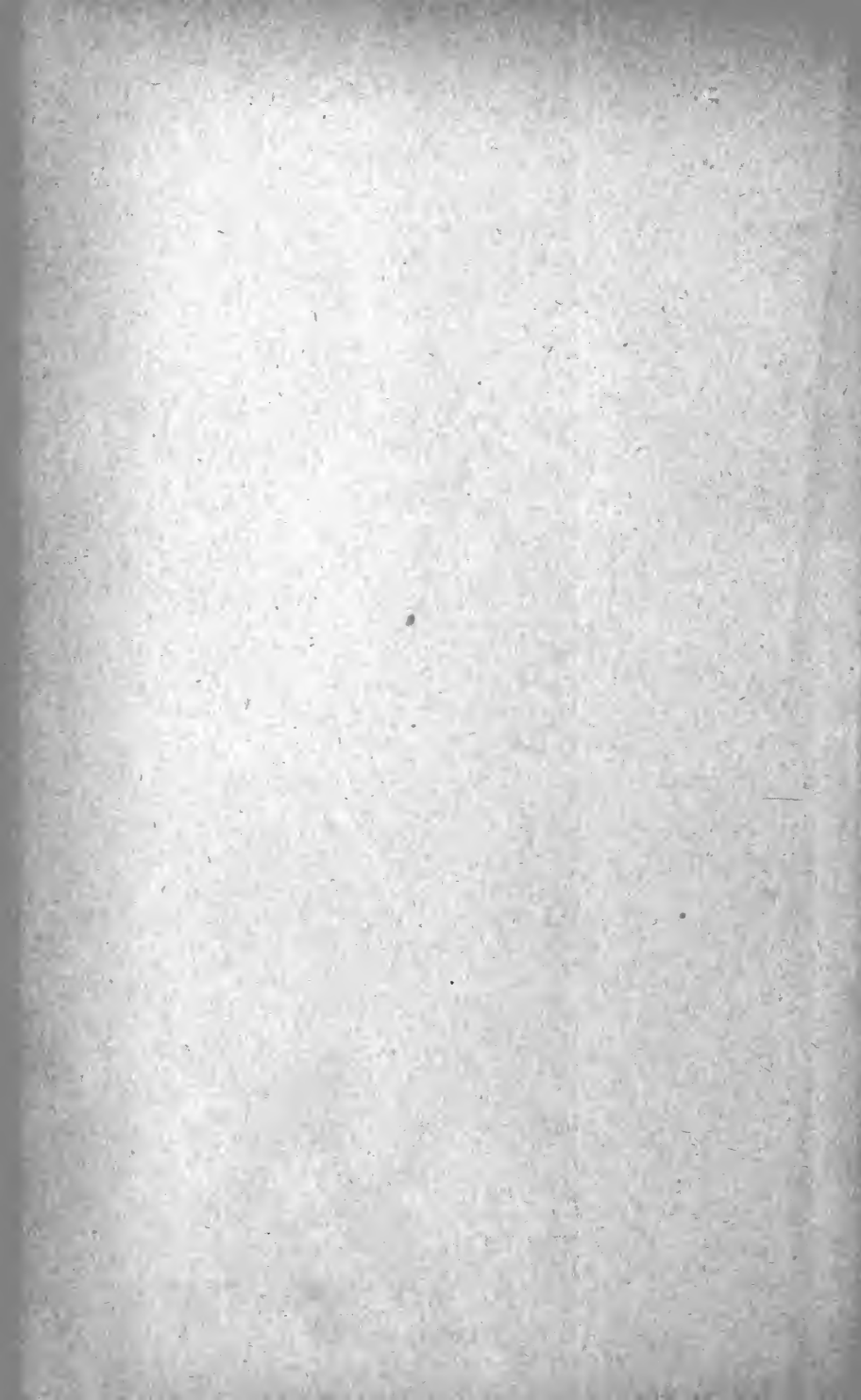
SECOND FLOOR PLAN

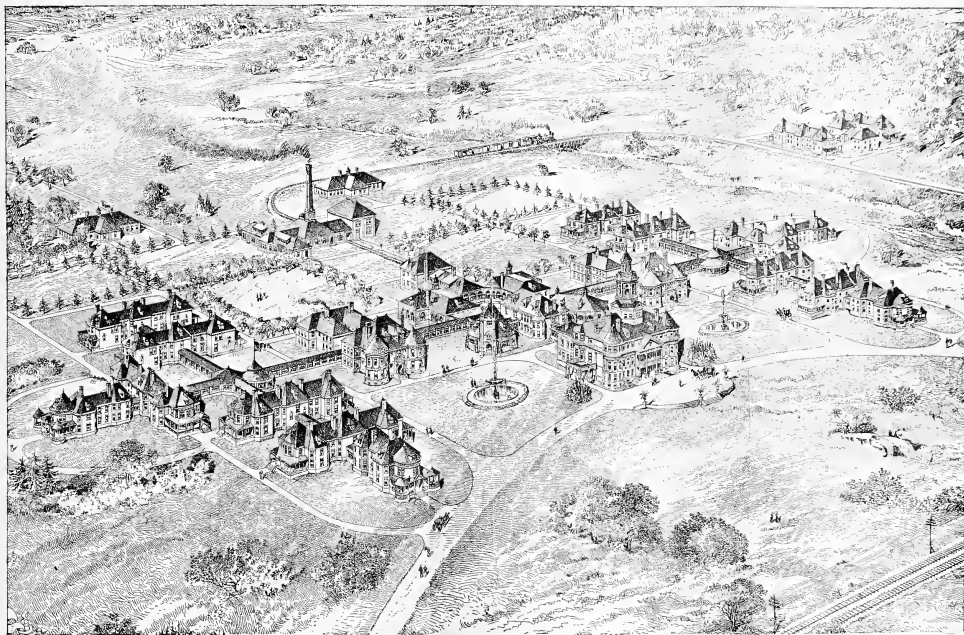


SCALE
1" = 10'

WESTERN PENNA. STATE INSTITUTION
FOR
FEEDLE-MINDED
FOLK-VENANGO-CO.

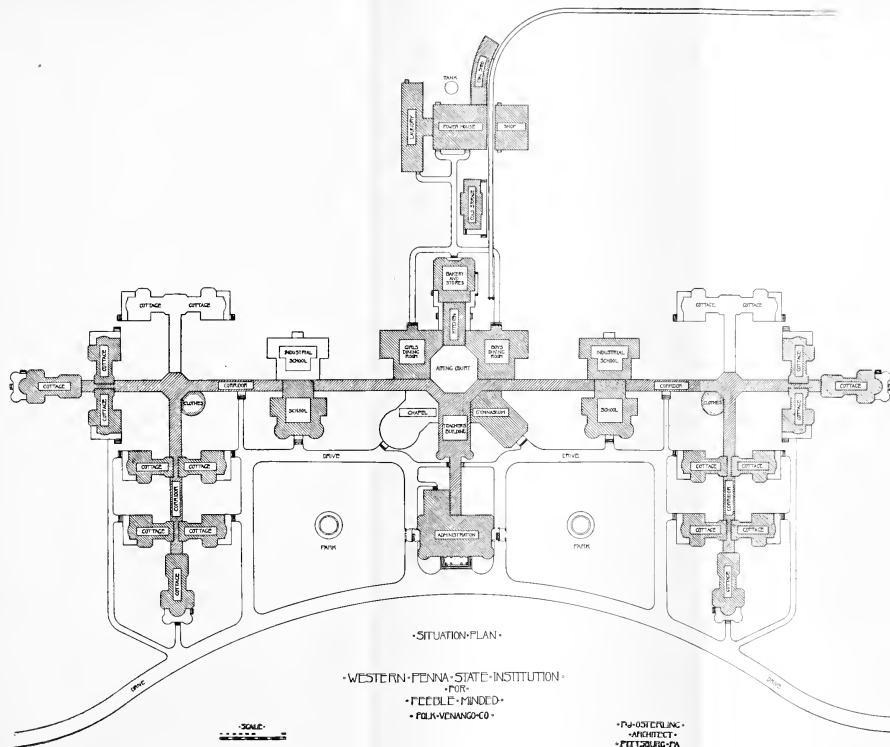
J. OSTERLING
ARCHTCT.
PTT SBURG-PA.





STATE INSTITUTION FOR FEEBLE-MINDED OF WESTERN PENNSYLVANIA.



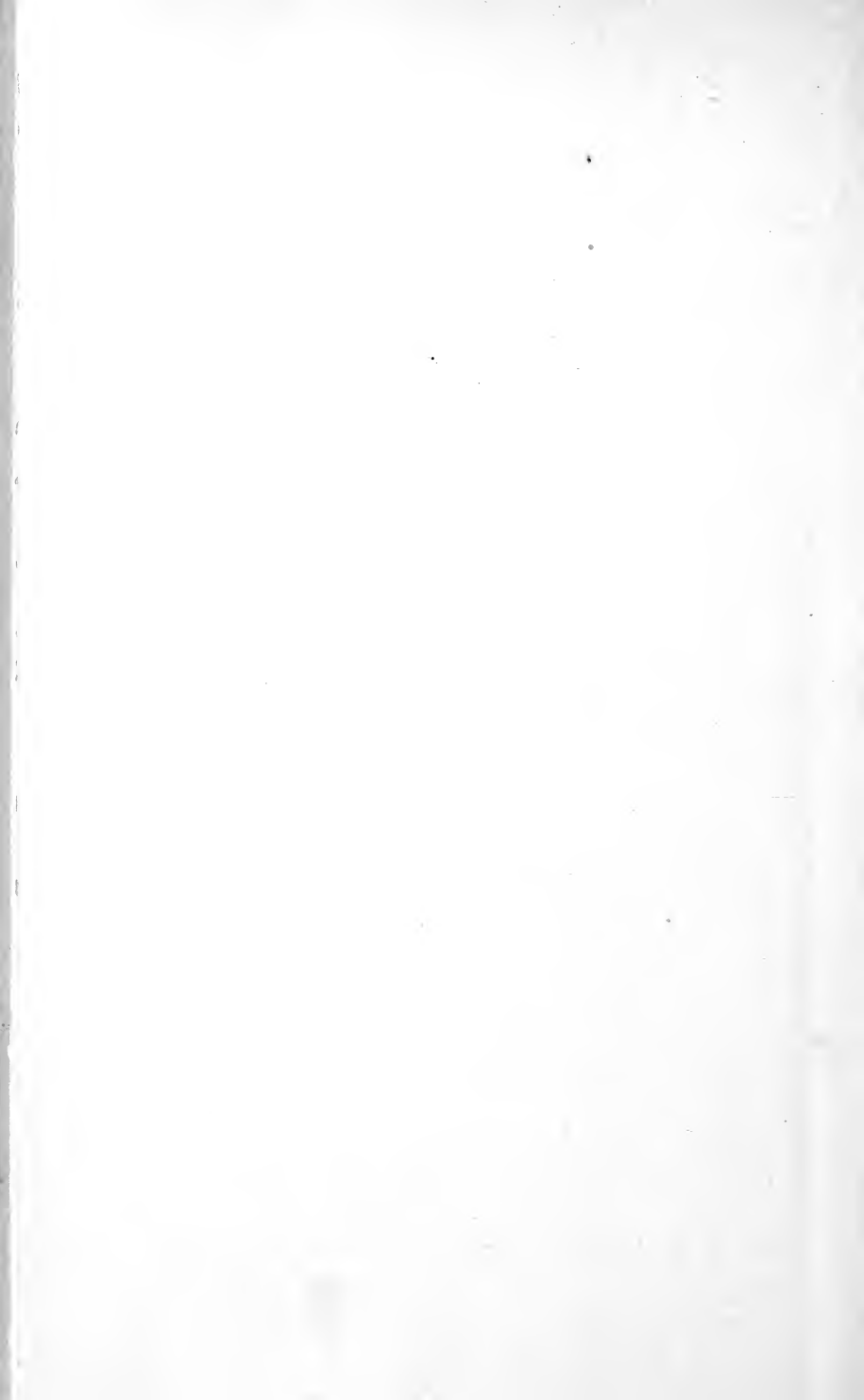


•SITUATION•PLAN•

-WESTERN-PENNA-STATE-INSTITUTION-
-FOR-

• FEEBLE-MINDED •
• POLK-VENANGO-CO •

• P.J. OSTERLING •
• ARCHITECT •
• PITTSBURGH, PA •



THE EPILEPTIC CHILD.

BY L. L. GLOVER, A. M., M. D.

Physician to Haddonfield Training School.

The successful management of cases of epilepsy in children depends to a great extent upon the standpoint from which they are considered. Many unsatisfactory results in their medical treatment are due to the impression that some specific treatment can be employed for the *disease*, and this frequently is the cause of unconscious empiricism until an unsuccessful instance demonstrates the fact that each individual is a distinct case of personal peculiarities of temperament or physique, and possessing, perhaps, traits and idiosyncrasies requiring special study. Upon assuming charge of an epileptic child, the epilepsy should become secondary in consideration until the physical and mental conditions are brought to a point nearest normal for that particular child, correct management meaning a study of physical and mental individuality, basing the hope of ultimate success upon a willingness to persevere assiduously in the study of the general welfare of the body and psychological influences.

While it is not the purpose of this paper to criticise scientific effort by alluding slightly to work that has been done, it may safely be said that if any mistake has occurred in the management of epileptics none is more probable than, in an effort to find a cause for the trouble, overlooking the patient's general condition, which, happening to be disturbed, might act as a factor in creating renewed paroxysms, the fact that epileptic attacks have usually a premonitory symptom or aura, as a sensation of nausea, a vision, muscular twitching of an extremity, etc., and that each case showing the aura has it each time the same, that is, preceding each attack, has the same vision, muscular twitching or whatever may be his premonitory symptom, creates a temptation to look upon the aura as indicating the cause of paroxysms, and, following logical inferences, presume that removal of the cause means cure. This is a very natural method to pursue, but, excepting when traumatism is a cause of the seizures, it does not promise success, because the aura cannot yet be regarded other than as part of the paroxysm itself, a symptom not of the cause but of the disease.

Epilepsy being clearly a nervous disease, and experience having demonstrated that general physical health and suitable environment is the ground work for improvement in nervous troubles, it reasonably follows that the management of these cases should be directed to this end. Upon assuming charge of a case, natural questions should be: What is the condition of the secretions of the body, of the stomach, bowels, kidneys, etc.? How near normal is each eye or ear? What is the condition of the mucus membrane of the nose and mouth? Has the food been suitable and well masticated and digested and are the teeth, salivary glands, stomach, etc., in condition to do their work? Following out these lines in the physical inquiry, is there any deformity, any deviation from normal functional action? These are important questions in managing this disease, for no nervous derangement can secure its proper opportunity to improve if a loaded rectum disturbs renal or ovarian functions, or if a slight shortening of one leg places undue strain or irritation upon the spinal nerves, and a well fed or underfed stomach bears direct influence that is readily discernable upon a nervous system more susceptible because of derangement. In good keeping with physical care should always be environment. Psychological influences tend according to their good or demoralizing effect to improvement or degeneracy. Epileptics are sensitive, many are abnormally so, and improvement has been observed simply from agreeable influences. The question as to how to make the atmosphere or surroundings agreeable for them is for the average case easily answered. Employment is necessary; some duties to perform that are suitable to the individual tastes, and, without being arduous, take plenty of time to fulfill in order to keep the mind occupied and enable it to realize its accomplishment of pursuits of usefulness. It is very valuable for an epileptic child to see and realize that he can do things as well as other children; a higher value is at once placed upon himself and morbid dwelling upon his misfortune decreases.

The management of epilepsy, if reduced to the study of individuals, bringing them to good general health, creating mental contentment, giving good and suitable employment and treating them with kind courtesy, not pity, greatly changes the drug influence, and improves the case to such an extent that less medical treatment is needed, and the little received has more satisfactory results.

LOCATING NEEDLES BY THE X-RAY.

A. C. ROGERS, M. D., Faribault, Minn.

M. C.—Age 32, nationality Irish. Admitted to Minnesota School for the Feeble-Minded, August 6, 1880. High grade imbecile, partially deaf. No early history on record.

Complained frequently of pain in right leg below knee, at various times, and in October, 1895, was reported at dispensary and the following record, in effect, was made:

Swelling on the right leg below middle third, between tibia and fibula. Scar of an old opening just below head of fibula, with a similar one two inches internally to this and one-half inch below. The symptoms indicated lesion of bone and a hard substance was detected by pressure upon swelling. Alterative treatment was prescribed. No improvement followed, and on November 5th the patient was placed under an anaesthetic. An incision was made by Dr. J. W. Bailey and a piece of a number one needle removed.

November 25th, thought another piece of needle could be detected lower down.

December 26th, old scar opened.

March 5th, 1896, small pieces of bone came away.

March 15th, swelling and tenderness again in upper part of region, very painful to touch.

June 1st, Dr. Bailey placed patient under ether and removed six pieces of needles.

June 17, wound healing, but indications are that one needle remains.

February 2, 1897, patient under care of Dr. Lucy A. Wheeler. Leg swollen and painful; poultices applied. Wound again opened and discharged freely, but no foreign material removed.

Patient has been accustomed to care for my own children, and often called my attention to fact that there was a needle in her leg, and sometimes would be obliged to rest after going up or down stairs. Examination showed upon one such occasion that the end of a needle was actually protruding, and I easily removed it with a pair of pliers. We were finally convinced that there was a large supply of needles in the vicinity of these wounds, and I took ad-

vantage of the first opportunity afforded for an X-ray diagnosis, which was made on February 17th, 1898. The resulting radiograph is shown by figure 1. A careful examination of the photograph disclosed what appeared to be the projections of thirty-five different needles and parts of needles.

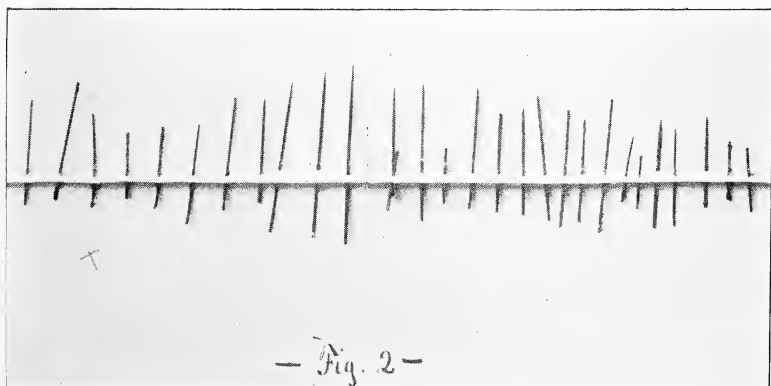
On March 29th, Drs. Wheeler and Warren placed the patient under ether and made an incisure about three inches long over the region already indicated, and removed twenty-nine needles and pieces of needles, as shown in figure 2. Although it was evident that the foreign pieces were not all removed, they were so scattered that the operation was very tedious, and it was not considered wise to keep the patient under ether longer, two hours having been consumed in removing the number stated. The wound was treated antiseptically and healed nicely without the formation of pus.

The manner and cause of the insertion of the needles is an absolute mystery. Patient has been an inmate of the school since fourteen years of age, and we have never known anything during the time of her residence that would give any light on the subject. She denies ever intentionally inserting them. The only explanation she gives is, that when she was a little baby she acquired these treasures by rolling around on the floor.

"Caresses are of great power for good or evil and must be reserved as rewards or stimuli. But injudiciously applied, they break the continuity of commenced efforts, cause a diversion from the task and a relaxation of the will; it gives the child an exaggerated idea of his own worth, or of that of his doings, and profoundly spoils his moral nature; moreover, a number of children cannot be caressed at all without danger, owing to certain nervous anomalies. Great discretion and reserve are required from teachers and others in this respect, for the moral government of idiots. Here once more we see how difficult it is to fill the place of a mother; in her absence, caresses, as an incentive to progress, are not pettings, and less the selection of pets."—(Sequin.)



— Fig. 1. —



— Fig. 2. —



SELECTED.

ARRANGEMENT AND AIMS OF THE PREPARATORY SCHOOL IN OUR INSTITUTIONS FOR FEEBLE-MINDED.

BY FR. FRENZEL,

Instructor in the Educational Institute for Feeble-Minded at Leschnits, O.-Schl.

From the *Kinderfehler*.

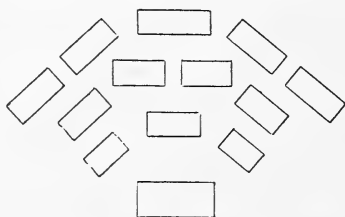
Institutions for the education and instruction of feeble-minded children have multiplied very greatly in recent times. Everywhere attempts are being made to help those who are weak in body and mind and to essentially improve their condition by different methods of instruction and management. These agreeable facts should inspire us to redouble our efforts in the interests of the feeble-minded and make it our aim to secure more judicious school equipments in our institutions and a better classification of the children.

Just as the public school has its preparatory school or kindergarten, the school for feeble-minded should have a preparatory school in which to render the pupils capable of learning and to lay the foundation for profitable instruction. The school should be divided into grades and classes similar to those in the public schools.

Upon their entrance into the institution, the majority of the children are in a very sad condition of physical and mental neglect, and, as a rule, nothing can be expected regarding them from which one can make a starting point for instruction, as the teacher in the public school can. Some of them show such inertia and dullness that they cannot by any means at first be induced to take any interest in their surroundings. Others are so restless that they run about without plan or purpose like unquiet spirits. Their command of speech varies according to the degree of mental disturbance. Some make a definite beginning, but often these children will utter only a thoughtless chatter of phrases learned by heart; others speak very intelligibly, while some are entirely speechless so that one would take them to be deaf. Many do not even comprehend the use of the mem-

bers of the body or the use of their senses. Such, and often, even worse, is the condition of the pupils upon their entrance into the institution. On the other hand, there are occasionally a few children among them whose mental stock permits entrance to the school at once without first finishing a course in the preparatory school. All other pupils, however, whose mental life is but little developed, belong in the preparatory school, where the exercises will, first of all, accustom them to order and prepare them for instruction. For this purpose, it is advisable that newly received pupils be separated into groups of not more than twelve children, and, wherever possible, the speechless and those who have disturbances in speech, in divisions of only six to eight children. When at play, the groups or divisions may be enlarged to a greater number.

Arrangement of desks and teacher's table.



The larger seats are placed back of the smaller ones and the children seated according to size.

Each division has its own particular school room for instruction, with its own arrangement. Seats with desks are used and the children are arranged according to size just as in institutions for deaf-mutes. The teacher's table stands in front of the pupils' desks, so that the teacher can easily see at a glance the assembled children on all sides and can conveniently reach each one singly. Such an arrangement of the seating space is very practical where the children have to leave the room suddenly. In any other arrangement, more or less disturbance is occasioned, but in the one described above the children can leave their places easily, and can reach them again conveniently without causing much disturbance.

The majority of preparatory schools for the feeble-minded have three grades, to each of which is devoted a course of one year; this makes three years in the preparatory school, and if we count two years for each grade in the school proper, we have a total of nine

school years. When we consider that eight years is required for children in public schools to finish the prescribed course, we certainly may with justice require an average nine year's school term for our children. In real practice, of course, the length of time depends upon the mental capacity of the child, which requires for one a shorter period, and for another a longer, but the time-course described above must be insisted upon unconditionally in order to reach the desired end.

The preparatory school should be an organized department or part of the school proper, and under the same direction. Medical inspection should be frequently made.

I have given in detail in my work "Instruction in Speaking for the Speechless Feeble-Minded," the characteristics and aims of instruction for the speechless feeble-minded in the preparatory school. (6th and 7th Nos. of the *Zeitschrift for the Treatment of the Feeble-Minded and Epileptic*, 1897). A detailed exposition at this place would be superfluous; it only remains to characterize more closely the three grades of the preparatory school for the other pupils.

The preparatory school, whose prevailing principle should be in conformity with nature, and the consequent awakening and regulation of individual impulses of life and activity in our children, does not call for the real earnestness of school work; play rules here, the principal expression of life in the child-world. It serves as the issuing point of all exercises which, for the first grade, must consist in exercises for the awakening of impulses of imitation, for the stimulation of sense activity, for the development of the power of comprehension and for the sharpening of perception. The principal rules and directions for these exercises are found in Seguin, "Moral Treatment, etc." in Stœtzner, "Schools for Weakly-Endowed Children," and in Barthold, "First Preparatory Instruction for the Feeble-Minded and Imbecile."

It is clear that each growing physical power, as well as each psychical, can become strong only through exercise. For this purpose, suitable object exercises should be given alternately with ones corresponding to the condition of their psychical strength. While carrying on these different exercises the teacher must be a careful observer. The choosing of judicious exercises, in what ways and by what beginnings they are to be pursued in single cases, is left to one's quick discernment and tact. The best method in general is very hard

to specify. During the school hours, vary the exercises, give new movements and suitable games in short periods of time in order to keep the children brisk and active. Mere sitting and listening generally makes them completely lifeless, consequently, they must talk, imitate, point, handle, etc., as much as possible. If, at the beginning, the feeble mind does not always succeed in properly following the requirements, only trust to the exercises established, and perseverance will often effect the desired end. In regard to the number of hours, 18 to 24 a week, in proportion to the grade, is a sufficient number for the preparatory school.

In schools for feeble-minded, and, particularly, in preparatory schools, there should be observed, as far as possible, an individual, slow and sure advancement in the instruction of mind, eye, ear, hand and mouth, free from all pedantry, based upon the observations and experiences of actual life and its phenomena, and carried on by an unconstrained, natural intercourse and by a bright and cheerful manner. The aim of the first grade is attained when the children become accustomed to order, when the power of apprehension is awakened and developed in them, and their attention aroused so that they manifest some susceptibility to perceptions of the grosser and more superficial sense impressions.

In the second grade come exercises in the continued use of the limbs and senses, exercises for broadening the power of apprehension, for holding the attention and for the development of the power of distinction. The children learn the use and application of different objects and utensils, as far as possible, and are required to exercise activities singly and in groups and to busy themselves with the simplest Froebel tasks. The advantage of a rational teaching of labor is not highly enough estimated for its material worth. The more manifold kinds of work one has done, the more advantageously will the children be stimulated mentally and physically, and so much the more susceptible to further instructive influences.

For broadening the power of apprehension, one should bring by degrees into the "sense-and-interest" circle of the child concrete objects and things about the room, at first only those lying nearest. Whenever possible, two or more senses should be exercised at the same time, for what is perceived by the eye, ear, the sense of smell or touch, at the same time, will leave behind a firmer and more lasting picture for contemplation than that which is grasped by but one sense

alone. For example, we not only speak of the apple tree as having a trunk, boughs and fruit, but we take the children to the tree and have them touch the trunk and limbs and put some of the fruit into their hands, whereby through actual experience they are brought to the perception and recognition of its qualities—round, red, of agreeable taste. Every contemplation, every experience, as long as the child still stands in a low grade of mental development, has a much greater influence than instruction by means of words. One must never disregard having the children contemplate the same objects in different positions, conditions and places, since such experiences help to a clear conception.

In all the exercises described above, "the reaction of the mind from the impulse centers is gradually conveyed to the spheres of observation and representation, so as to bring these into an active condition, (the child learns to observe and perceive voluntarily), and thus impulsive attention advances to voluntary attention." The latter awakens in some children more quickly than in others, and comes next in easiness or difficulty for our children, to their power of learning by observation, since a child who cannot be brought to the point of learning voluntarily to exercise his attention will remain simply locked to all instructive influences following.

All the exercises and preparatory work are fitted to awaken, also, in our children the real foundation stock for intellectual perceptions in contrast to sense perceptions. A beginning is made by having the pupils become acquainted with the simplest relations between single objects and activities, in which it must be remembered that the children will be able to distinguish so much the better, the more exercised and susceptible their minds have become. First of all, exercises should be given in which only the gross and superficial relations of things have to be found out. Only strong contrasts are grasped easily; similar things, on the other hand, require greater sharpness of mind. Color and form make the most impression upon our pupils while they are almost entirely indifferent to numbers. Accordingly, then, exercises in distinguishing should be pursued, first, always with natural, real objects; the palette and frame-board must not be produced prematurely; after the power of observation is won to natural things, then each may be used as a means of supplement. It must always be remembered that exercises of this kind, as productive of results as they may seem to be, are not original and natural, there-

fore are not able fully and completely to answer the intended purpose. The same is true of models and pictures, although, to be sure, they may be used later, if necessary.

While in the first grade, intercourse with the children is free and unconstrained, in the second, a stricter discipline is maintained which is expressed in the outward order and common behavior of the children. Still more must this be observed in the third grade, which brings the preparatory course to an end, and whose purpose consists in improving and making the children capable of instruction in the lower grades of the school proper.

In the third grade of the preparatory school, the intuitive method of instruction is made the prevailing feature which is to be carried on according to the principles mentioned before. The observation circle of our pupils will be essentially widened when objects foreign to their "sense-and-interest-circles" are brought into the realm of their consideration. The children should become capable of naming objects from their material side, giving their qualities, attributes, etc., and be able to recognize and pronounce their names when coming across them in simple sentences. Short, simple poems within the understanding of the children may be memorized in order to enliven the instruction a little. As a rule, there is no great difficulty in this, since many of the children seem to possess a special gift for memorizing. Included in the intuitive method of instruction are exercises in articulation, in reading and writing, the beginning of numbers, calisthenic exercises and the first religious teachings.

Exercises in articulation, by means of which the children must gain mastery over their organs of speech and remove any impediment existing in them, should be employed according to the need for them. They are of especial value as preliminary exercises to reading.

When first learning to read, the child has much difficulty in recognizing single letters, and for this reason, the phonetic character of each should be impressed upon his mind as vividly as possible. Many of the phonetic signs can be remembered by their similarity to certain things the name of which refers back again to the designated sound. (In this connection, I am reminded of an interesting experience in school which our teacher, Fraulein B., relates. She tried, for example, to show the similarity in form of the letter "s" to that of a mouse, and said to the children: "This letter looks something like a little mouse with a small tail." The lower part, something like the

form of the figure 8, is the mouse, the upper hook, the tail. Then she uttered the word "mouse" with a sharp emphasis upon the "s" and gave the children the name of the phonetic sign or letter. It is worthy of notice that they learned the sound quickly and readily and remembered it very well). The similarity of some of the letters to certain objects generally facilitates their apperception; the child remembers it by looking at the letter and at the same time the respective object with its corresponding sound. In teaching reading, it must be taken into consideration that the children are not able to recognize fine distinctions at the beginning, and, therefore, this fact must be observed in comparing such letters as *t* and *d*, *g* and *k*, *b* and *p*, *ei* and *eu*, etc. The reading of words of two syllables may be taken up as soon as the pupils have obtained sufficient fluency to distinguish one letter from another. A fluent reading is not required in this grade; it is sufficient if the children are able to read combinations of two and three syllables which are put together upon the reading-machine. The pupils themselves, also, should arrange different combinations upon the reading-machine and read them, since by so doing self-activity is usually promoted. Care must be taken that the combinations lie within the comprehension of the children and that they are properly explained.

Writing, which usually is harder for our children than reading is, may be prepared and practised according to the Froebel method, for example, by arranging the small sticks in forms of letters while the pupils try to represent upon the board, in a most elementary way, the figures formed. On account of this difficulty in writing, it is advisable to spend a good deal of time upon the elements and to make no further advance until the eye and hand are properly trained.

Number work should also be begun in the third grade. It is sufficient for this grade when the children have learned to represent the numbers from 1 to 5 and to perform simple operations with these numbers. One must be very thorough and not proceed a step farther until the material gone over has been thoroughly mastered by the children, for if a superficial progress ever avenges itself, it certainly does here.

The gymnastic exercises are developed from their games; in them the child has already learned to imitate different movements of the body and limbs. While a good deal of freedom prevails in their games, in the gymnastic exercises a certain system is maintained

which keeps the children under definite discipline and order. The principal object of the gymnastic exercises for this grade is to develop and strengthen the physical powers of the pupils that they may advance in their relation to discipline and order, to obedience and moral conduct, as well as in exercise of will. The following should be practiced: walking, running, jumping, movements of the body and head, arm, hand, and finger exercises and simple exercises for the feet.


I come now to the first religious instruction. When one reads, for example, in Sengelmann's "*Lehrbuch der Idioten-Heilpflege*," "The beginning and end of teaching is religious instruction, etc.," and then, again, in another, "The idiot is capable of no religious elevation," what is one to think? To make religious instruction the first and last object of teaching, is just as preposterous as banishing it completely from the course of instruction; it must have as distinct a place here as in the public schools. We shall not be able, to be sure, to prescribe a definite course in religious instruction for our children in the preparatory school. We can, however, by a preparatory instruction, through dwelling on good conduct and morals with opportune reference to God, relating some of the simplest Bible stories for children, with the use of Bible pictures, awaken in them a representation of the presence of God and His works, and make them capable and ready for further instruction. A few of the shortest and most simple childish prayers and Bible verses may be committed to memory.

I have now characterized the preparatory school in its instruction and aims, and will only add that it is not at all necessary for every child to spend three years in this school. If their mental capacity permits, or a quicker development requires it, one grade may be omitted or the children promoted to a higher grade before the term ends.

Instruction in the preparatory school of most institutions is not so good as it should be, and their greatest mistake, usually, is this, that they very often possess too little teaching-ability and almost never have experienced teachers for the preparatory school. If the Conference for "*Idiotenwesen*" have repeatedly agitated the question of a special training for teachers of idiots, it is to be lamented that, so far, no further steps have been taken. According to my opinion, teachers who belong in feeble-minded institutions are those who have received a special training for such work, both theoretical and practical, and who are thoroughly informed about the nature of idiocy, education and instruction of idiots, as well as the treatment of

impediment in speech, and also, have some knowledge of psychiatry. The care and education of the feeble-minded demands much intelligence, great tact, good powers of observation and a fine moderation, and for this reason, certainly, only the best teaching ability should be employed for them. It is true this would involve considerable more expense, but it is more than offset by the benefits to be derived. "He that hath pity upon the poor, lendeth unto the Lord; and that which he hath given, will he pay him again."

"Long before physicians had conceived the plan of correcting the false ideas and feelings of a lunatic by purgatives, or the cranial depressions of an idiot by bleeding, Spain had produced several generations of monks who treated with the greatest success all kinds of mental diseases without drugs, by moral training alone. Certain regular labors, the performance of simple and assiduous duties, an enlightened and sovereign volition, watching constantly over the patients, such were the only remedies employed. 'We cure almost all our lunatics,' said the good fathers, 'except the nobles, who would think themselves disgraced by working with their hands.'"—*Seguin*.



The Journal of Psycho-Asthenics.

VOL. II.

JUNE, 1898.

NO. 4.

A quarterly journal, devoted to the education and care of the Feeble-Minded and the care and treatment of Epileptics. Published under the auspices of the Association of Officers of American Institutions for Feeble-Minded.

EDITOR-IN-CHIEF:

A. C. ROGERS, M. D., - - - Faribault, Minn.

ASSOCIATES:

W. E. FERNALD, M. D., - - - Waverly, Mass.

A. W. WILMARTH, M. D., - - - Chippewa Falls, Wis.

F. M. POWELL, M. D., - - - Glenwood, Iowa.

M. W. BARR, M. D. - - - Elwyn, Pa.

Address: JOURNAL OF PSYCHO-ASTHENICS, Faribault, Minn.

(Entered at the Postoffice at Faribault, Rice Co., Minn., as second class matter.)

EDITORIAL.

DOES THE EDUCATION OF THE FEEBLE-MINDED PAY?

In 1883 Governor Butler, of Massachusetts, in his message to the Legislature, referred to the School for Feeble-Minded in the following language :

“When the State shall have sufficiently educated every bright child within its borders, it will be time enough to undertake the education of the idiotic and feeble-minded. I submit that this attempt to reverse the irrevocable decree as to ‘the survival of the fittest’ is not even kindness to the poor creatures who are at this school. Give them an asylum, with good and kind treatment; but not a school. The report from that school shows that none of its pupils have been made self-supporting by its teachings. The report further shows that those in whom some spark of intelligence has been awakened, have become so ashamed of their school that when they write to their parents they beg for paper and envelopes which have not its card upon it. That is, they have been educated simply enough to know of their deficiencies and be ashamed of them-

selves and their surroundings. We do not contribute to their happiness by giving them that degree of knowledge. A well-fed, well-cared-for idiot, is a happy creature. An idiot awakened to his condition is a miserable one."

An occasional skeptic on the question of schools for feeble-minded is the excuse for referring to this sentiment.

Whatever may have been the motive for these strictures, or the condition of the School at South Boston at that time, it is a significant fact that the school soon after started upon a career of expansion and has since grown, not only in the extent and character of its work, but in its influence upon the processes of education as applied to the feeble-minded in other states.

It would seem, it is true, that the law of the "survival of the fittest" is largely ignored in the education of the feeble-minded, and it is also true that many children possessing feeble minds are exceedingly sensitive concerning their relation to the school. According to the observation of the writer, however, those children who are the most sensitive about being considered pupils of a school for feeble-minded, are among the brightest and the most capable. This condition is not a reflection upon the training of the school *per se*, or the selection of the children in attendance. The Governor overlooked, and doubtless was ignorant of the fact, that nearly all feeble-minded children suffer continually, both mentally and morally, from forced comparisons with normal children until they receive the friendly protection of the school. They not only suffer this continual torture, but this is in itself a serious obstacle to improvement, because of the repulsive attitude the children therefrom assume toward their environments. Their general condition in the school, as is well known by all who have given the matter any attention, is one of happiness and contentment. It will thus be seen that we have in one case a few children in the schools sensitive about their association, but developed to a self-supporting condition; in the other, the great majority of feeble-minded children, at first sensitive, then irritable and finally callous and ugly in disposition, a helpless burden to their friends and a nuisance to the neighborhood.

There is often, it is true, an overweening confidence that borders upon officiousness and that inspires the possessor to as-

sume responsibilities far beyond his capacity ; yet that is true often of normal minds after the completion of a college course. As the college boy must go through an education in the practical affairs of life, so must our boys and girls in the schools for feeble-minded go through an experience that leaves them more or less completely to their own resources, before they learn their own true capacities and limitations.

As to the actual degree of independence developed, we shall hope to say something later.

THE VINELAND MEETING.

The meeting in May at Vineland, N. J., was very satisfactory in attendance and interest. Only a very few of the older, living members were absent and several new members were present for the first time. The more formal papers and addresses were: The "Annual Address of President," Dr. Geo. Brown, Barre, Mass.; "Nasal Reflexes and the Aggravation of Mental Symptoms in the Feeble-Minded," Dr. J. Madison Taylor, Philadelphia; "Physical Anomalies of the Feeble-Minded," Dr. A. W. Wilmarth, Chippewa Falls, Wis.; "Adenoma Sebaceum," Dr. M. W. Barr, Elwyn, Pa.; "The Educated Imbecile," Dr. S. J. Fort, Ellicot City, Md.; "Locating Needles by the X-Ray," Dr. A. C. Rogers, Faribault, Minn.; "Some Thoughts on Teaching the Idiot," Mrs. Eldridge, Lapeer, Mich.; "A Winter in Sloyd," Miss Lucile Gilman, St. Cloud, Minn.

The best feature of the meeting was the good feeling and enthusiasm of the members and the active part and interest taken in the proceedings by all. The social features were delightful and the association has seldom been honored by such elaborate and such well executed plans for entertainment as it found at the New Jersey School for Feeble-Minded Women, with Dr. Mary J. Dunlap in charge. The minutes of the meeting will be printed in full in the next number.

THE MEETING FOR 1899.

Everyone realizes the impossibility of properly preparing a paper for publication or public discussion during the last few days.

prior to its delivery, unless, at least, the data for its preparation has been collected and under consideration for a long time. It was proposed at Vineland that a few subjects be assigned one year in advance, although these were not to interfere in any way with any other material that might appear or be desirable later, nor with the liberty of any one else to choose his own subject later. A committee appointed for the purpose made the following assignments, after consultation with the members present: "The Self-Supporting Imbecile," Alex. Johnson; "Paralytic Idiocy," Dr. W. E. Fernald; "Cases of Idiocy without Physical Defects," Dr. S. J. Fort; "The Use of Nature Studies in Sense Training," E. R. Johnstone; "The Study of the Blood in Idiocy," Dr. A. W. Wilmarth; "Circulatory Anomalies in Idiocy," Dr. W. A. Polglase; "The Thyroid Treatment of Cretinism," Dr. J. M. Murdock; "Legal Control of the Feeble-Minded," Dr. A. C. Rogers. These subjects were assigned because of the announced interest of the persons present in the subjects assigned to them respectively. It was desired by the committee that especial attention be given during the year to these subjects by their authors, with a view to presenting the results of a year's study and investigation at the meeting in New York. In the meantime, let it be distinctly understood that this proposed programme is in no way to exclude anyone else or any other subject. The Secretary takes this method of reminding the members who have assignments of their topics, and of requesting any others, to select their topics as early as possible, so that ample time may be given to their consideration.

From N. Y. Tribune.

DEATH OF DR. E. C. SEGUIN.

We referred in the last number to the will of Dr. E. C. Seguin. The following brief sketch of his life was published in the Daily Tribune of March 21st:

"Dr. Edward Constant Seguin, the well-known physician, of No. 47 West Fiftieth st., New York, died on Feb. 19th, 1898. Dr. Seguin was born in Paris, France, in 1843. He was the only child of Dr. Edward O. Seguin, whose brother, father and several rela-

tives of the same name were physicians, chemists, engineers and architects. Dr. Edward O. Seguin devoted nearly all his life to the training and education of idiotic and backward children, in France and in this country. In 1850 Dr. Seguin emigrated to this country with his family, and finally settled in Cleveland, Ohio. There and in Portsmouth, Ohio, Dr. E. C. Seguin received a good public school and high school education. One year of this time was given to an apprenticeship at the wheelwright trade in Portsmouth. Circumstances made it impossible for him to go to college. In 1861, then living at Mount Vernon, this State, he began the study of medicine with his father.

Later he attended three courses of lectures at the College of Physicians and Surgeons, in this city, and was graduated therefrom in the autumn of 1864. Meanwhile, in May 1862, Dr. Seguin had entered the medical department of the Army, serving for the first two months, when less than nineteen years old, as dresser in the hospital steamship of the United States Sanitary Commission, in the Pamunkey and James Rivers. In July he was appointed a medical cadet in the Regular Army and served two terms, till August, 1864. During much of this time he had practically charge of the patients in the wards to which he was attached, performing all the duties of a surgeon except the doing of major operations. In this hard service, living in the hospitals, he developed non-tubercular phthisis in the spring of 1864, from the effects of which he did not recover for several years. From September, 1864, to June, 1865, he served at Little Rock, Ark., as acting assistant surgeon, and during the last two months, as assistant surgeon, United States Volunteers. From 1865 to 1867 he passed through the grades of interne and house physician at the New York Hospital, then at Broadway and Duane streets. Early in 1868 symptoms of phthisis returned and he applied for a place in the medical department of the army. By special courtesy of the Surgeon-General he was assigned to duty in New Mexico, and there served as post surgeon at Forts Craig and Seldon. In the summer of 1869 he returned to New York entirely cured, as the result showed, of his pulmonary trouble.

Soon after the opening of the Connecticut Hospital for the

Insane, Dr. Seguin was appointed pathologist for the hospital, which position he held for about ten years. The winter of 1869-70 was spent by Dr. Seguin in Paris, studying privately under Brown-Sequard, Charcot, Ranvier and Cornil. This course of study led him to look forward to making nervous diseases a specialty, but after his return to New York he entered upon a general practice in association with Dr. William H. Draper. In 1876 this friendly association was severed, in order that he might devote himself exclusively to the study and treatment of nervous diseases. From 1871 to 1885 Dr. Seguin was connected with the faculty of the College of Physicians and Surgeons; lecturing upon diseases of the spinal cord and upon insanity. In 1873, with the permission of the faculty, he founded the Clinic for Nervous Diseases. Between 1882 and 1893 Dr. Seguin was in Europe several times, but resumed the practice of his specialty whenever he was in New York.

Dr. Seguin wrote many monographs relating to nervous diseases, more especially to their treatment by hygienic as well as by medicinal means. He was one of the founders of the American Neurological Association and of the New York Neurological Society; and these, with the New York Pathological Society, received most of his attention. He was also a member of several other American and European medical societies.

His health began to fail in the winter of 1894-95, but in spite of loss of strength he did not give up professional work until July, 1896. Soon after this the real nature of his illness became apparent.

On October 31st, 1882, occurred a lamentable tragedy in the life of Dr. Seguin, when his wife, Margaret, shot and killed her three young children and then committed suicide. Mrs. Seguin had previously lived happily with her husband, and the finding of the coroner's jury declared that she was suffering at the time of her death from mental aberration.

The funeral of Dr. Seguin was held at his late home, No. 47, West Fiftieth street, at 3 p. m. on February 22d, 1898.

NOTES AND ABSTRACTS.

A STATE BOARD OF CONTROL takes charge of all of the Iowa State institutions July 1st, 1898. Some of the salient points of the bill providing for said board are as follows: The board is composed of three members appointed by the governor, and approved by the senate, for a term of six years, terms expiring in rotation every two years. Not more than two members shall belong to the same political party. Removals for malfeasance or nonfeasance in office may be made by the governor, subject to senatorial approval. The whole time of the members of the board is to be given to the duties of their office, and each is to have a salary of \$3,000 per annum. The board shall have a secretary whose salary shall not exceed \$2,000 a year, a stenographer and other necessary help. Traveling expenses are also allowed when approved by the governor. The board, or a committee thereof, must inspect each institution at least once in six months, and each hospital for the insane monthly. It shall appoint the executive officer of each institution for a term of four years, and the latter shall appoint all subordinate officers and employes, the number being determined by the board. Salaries are fixed annually by the board with the approval of the governor. The board is prohibited from influencing in any way the appointment of subordinates. Executive officers may be removed by the board for due cause, after a proper hearing has been granted them.

The board shall encourage and urge scientific investigation of the "treatment of insanity and epilepsy by the medical staffs of the insane hospitals, and the institution for the feeble-minded, and shall publish, from time to time, bulletins and reports of the scientific and clinical work now done in said institutions," etc. Every member of the board, and every officer and employe of the several institutions, is prohibited from exerting an influence "directly or indirectly to induce other officers or employes of the state to adopt his political views or to favor any particular person or candidate

for office," or to "contribute money or other things of value to any person for election purposes." The financial management of the institutions is duly provided for and proper legislative provisions made for the investigation of any alleged abuses, financially or otherwise. The employment of a state architect is also authorized.

The board appointed for the first term consists of Ex-Governor Larrabee, Judge Kinne and John Cownie.

"A NATIONAL SOCIETY FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS" was organized May 24th, at a meeting held for that purpose in New York City. The society opened with a membership of forty-four and the following officers were elected: President, Hon. William Pryor Letchworth, LL.D., New York; first vice-president, Frederick Peterson, New York; second vice-president, Prof. William Osler, Maryland; secretary, William P. Spratling, New York; treasurer, H. C. Rutter, Ohio. Application for membership should be addressed to the secretary at Craig Colony, Sonyea, New York.

THE NEW BUILDING OF THE CHIPPEWA FALLS HOME FOR FEEBLE-MINDED was completed last March. It is a two-story brick building, with light sand-stone foundation and trimmings.

It is composed of a center building and two wings. The entire length of the building is 225'. The central portion is 41' by 154' and contains the kitchen, dining rooms and offices on the first floor, and living quarters for employes on the second. The wings include the day rooms, dormitories and school rooms, and are 33' by 115'. The wings include four departments, each of which accommodates 38 children. This will ultimately be used exclusively for custodial cases, but at present is designed for all classes.

A large barn has been recently completed. These two buildings will exhaust the appropriations made by the last session of the legislature.

A CONFERENCE OF OFFICERS AND TEACHERS OF THE INSTITUTIONS FOR IMBECILES IN DENMARK, SWEDEN, NORWAY AND FINLAND

at Copenhagen, in July. The following subjects on programme for discussion: "A Short Description of the Development of the Care of Imbeciles in Denmark from 1884-98," Superintendent Rolsted; "The Controlled Family-Care of Adult Imbeciles," Prof. Keller; "The Antisocial Imbecile in the Institution," Prof. Keller; "The School in Relation to the Working Department for Imbeciles," Principal Teacher Prytz; "Tuberculosis, Especially as Cause of Death in the Institution for Imbeciles," Medical Superintendent Früs; "The Employes for the Custodial Asylum for Imbeciles and their Work," Inspector Graae; "The Care of the Epileptic, Especially the School Department for Children," N. Dallhoff; "What may be the Best Age for Beginning the Education of Imbecile Children," Superintendent Tönsson; "On the Speech of Imbecile Children and the Ways of Improvement," Inspector Damm; "Physical Carriage of Imbecile Children," Superintendent Mikkelsen; "Schools for Backward Children," School Director Carl Lippestad; "School Kitchens for Imbeciles," Superintendent Lippestad; "Is Teaching of Imbeciles Justifiable?" Superintendent Lippestad; "A Journal for the Institutions for Imbeciles," Teacher Laberg; "The Treatment of Sporadic Cretinism and Other Cases by Thyroid Extract," M. W. Hellstrom; "What is to be Done to Better the Instruction of the Public about Institutions for Imbeciles," Bichfeldt; "Instruction of the Employes of Institutions for Imbeciles in Sick Nursing," M. W. Hellstrom; "The Social Result of the Care of the Imbecile," Revisor Linblom.

NOTE.—The above notice was sent to the JOURNAL by Prof. C. W. Keller, of Copenhagen.

PRIVATE SCHOOLS.

THE SEGUIN SCHOOL FOR CHILDREN OF ARRESTED DEVELOPMENT.

Nineteenth Year,

Twenty-five Pupils,

Thirteen Teachers.

370 Centre St.,

ORANGE, N. J.

1848.

1898.

PRIVATE SCHOOL,

Barre,

Massachusetts.

DR. GEO. A. BROWN.

J. Q. A. STEWART, M. D.

JOHN P. STEWART, M. D.

STEWART HOME,

Farmdale,

Kentucky.

For the care and training of Persons of
Backward Mental Development and the
treatment of Nervous Diseases.

THE FONT HILL PRIVATE INSTITUTION

—for—

Feeble-Minded and Epileptic Children.

Established in 1886.

SAMUEL J. FORT, M. D., Supt.

P. O. Address,

Ellicott City, Md.

MISS BAKER'S PRIVATE SCHOOL

—for—

Backward and Nervous Children.

MISS LAURA BAKER,

Northfield, Rice county, Minnesota.

Orders will now be received for the

SECOND DECENNIAL VOLUME

of Proceedings, 1886-1896. They are bound uniformly with the first volume, in half morocco, and sent post paid to any point in the States at \$2.25 per volume.

There are still a few copies of the *First Decennial Volume* on hand, and for sale at \$2.25 per volume.

These two books contain the principal literature on Idiocy published in English during the last two decades. Send orders to

DR. A. C. ROGERS,
Faribault, Minn.



The ordinary emulsion of cod-liver oil, for nutritive properties, depends entirely upon the proportion of cod-liver oil present. Irish moss and acacia are non-assimilable gums—a burden to the digestive organs. **Parke, Davis & Co.'s Egg Emulsion of Cod-liver Oil** is all food. It contains 40 per cent. by volume of pure cod-liver oil, emulsified only with eggs, and flavored with a fine quality of brandy. Every ingredient a nutrient.

Acme
Rood Bros. Co., Inc.
360 Summer Street
Boston 10, Mass.

3 9097 00991676 9

NOT FOR
HOME CIRCULATION

3 09877

